



# For Reference

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# NORTHEASTERN UNIVERSITY



*Catalogs of*

COLLEGE OF LIBERAL ARTS

COLLEGE OF ENGINEERING

COLLEGE OF BUSINESS ADMINISTRATION

SCHOOL OF LAW

SCHOOL OF BUSINESS

EVENING COURSES OF THE COLLEGE OF LIBERAL ARTS



# Northeastern University

COLLEGE OF  
LIBERAL ARTS

1942-1943



BOSTON, MASSACHUSETTS

January, 1942

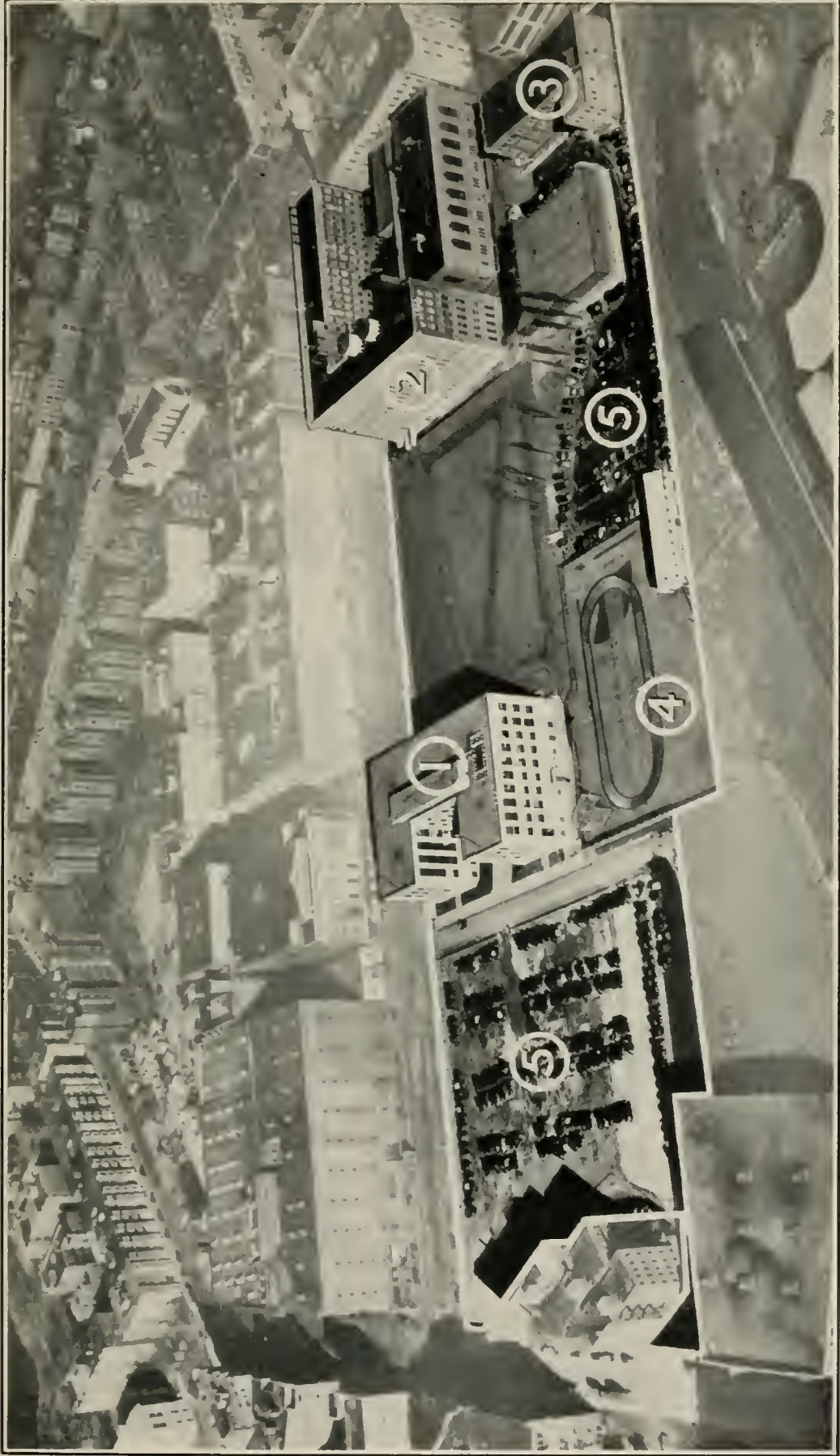
## GIFTS AND BEQUESTS

Northeastern University will welcome gifts and bequests for the following purposes:

- (a) For its building program
- (b) For general endowment
- (c) For specific purposes which may especially appeal to the donor.

It is suggested that, when possible, those contemplating gifts or bequests confer with the President of the University regarding the University's needs before legal papers are drawn.

Gifts and bequests should be made only in the University's legal name, which is "Northeastern University".



## NORTHEASTERN UNIVERSITY

1. Richards Hall
2. East Building
3. South Building
4. Outdoor Gymnasium
5. University Parking Areas





RICHARDS HALL



# NORTHEASTERN UNIVERSITY

## *College of Liberal Arts*

*Conducted on the Co-operative Plan*

### *Catalogue*

*1942-1943*

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# Freshman Calendar, 1942-1943

## SEPTEMBER

S	M	T	W	T	F	S
		①	②	③	④	⑤
⑥	⑦	⑧	⑨	10	11	12
⑬	14	15	16	17	18	19
⑳	21	22	23	24	25	26
㉑	28	29	30			

## OCTOBER

S	M	T	W	T	F	S
				1	2	3
④	5	6	7	8	9	10
⑪	⑫	13	14	15	16	17
⑱	19	20	21	22	23	24
㉒	26	27	28	29	30	31

## NOVEMBER

S	M	T	W	T	F	S
①	2	3	4	5	6	7
⑧	9	10	11	12	13	14
⑮	16	17	18	19	20	21
㉒	23	24	25	㉑	27	28
㉓	30					

## DECEMBER

S	M	T	W	T	F	S
		1	2	3	4	5
⑥	7	8	9	10	11	12
⑬	14	15	16	17	18	19
⑳	㉑	㉒	㉓	㉔	㉕	㉖
㉗	㉘	㉙	㉚	㉛		

## JANUARY

S	M	T	W	T	F	S
					①	②
③	4	5	6	7	8	9
⑩	11	12	13	14	15	16
⑰	18	19	20	21	22	23
㉒	25	26	27	28	29	30
㉓						

## FEBRUARY

S	M	T	W	T	F	S
	1	2	3	4	5	6
⑦	8	9	10	11	12	13
⑭	15	16	17	18	19	20
㉑	㉒	23	24	25	26	27
㉓						

## MARCH

S	M	T	W	T	F	S
	1	2	3	4	5	6
⑦	8	9	10	11	12	13
⑭	15	16	17	18	19	20
㉑	22	23	24	25	26	27
㉒	29	30	31			

## APRIL

S	M	T	W	T	F	S
				1	2	3
④	5	6	7	8	9	10
⑪	12	13	14	15	16	17
⑱	⑲	20	21	22	23	24
㉒	26	27	28	29	30	

## MAY

S	M	T	W	T	F	S
						1
②	3	4	5	6	7	8
⑨	10	11	12	13	14	15
⑱	17	18	19	20	21	22
㉒	24	25	26	27	28	29
㉓	㉔					

## JUNE

S	M	T	W	T	F	S
		①	②	③	④	⑤
⑥	⑦	⑧	⑨	⑩	⑪	⑫
⑬	⑭	⑮	⑯	⑰	⑱	⑲
㉒	㉑	㉒	㉓	㉔	㉕	㉖
㉗	㉘	㉙	㉚			

## JULY

S	M	T	W	T	F	S
				①	②	③
④	⑤	⑥	⑦	⑧	⑨	⑩
⑪	⑫	⑬	⑭	⑮	⑯	⑰
⑱	⑲	㉒	㉑	㉒	㉓	㉔
㉕	㉖	㉗	㉘	㉙	㉚	㉛

## AUGUST

S	M	T	W	T	F	S
①	②	③	④	⑤	⑥	⑦
⑧	⑨	⑩	⑪	⑫	⑬	⑭
⑮	⑯	⑰	⑱	⑲	㉒	㉑
㉒	㉑	㉒	㉓	㉔	㉕	㉖
㉗	㉘	㉙				

Days on which college exercises are held are indicated thus: **1 2 3**

Sundays, holidays, and vacations are indicated thus: ① ② ③

# Upperclass Calendar, 1942-1943

## SEPTEMBER

S	M	T	W	T	F	S
		①	②	③	④	⑤
⑥	⑦	⑧	⑨	⑩	⑪	⑫
⑬	14	15	16	17	18	19
⑫	21	22	23	24	25	26
⑫	28	29	30			

## OCTOBER

S	M	T	W	T	F	S
				1	2	3
④	5	6	7	8	9	10
⑪	⑫	13	14	15	16	17
⑮	19	20	21	22	23	24
⑫	26	27	28	29	30	31

## NOVEMBER

S	M	T	W	T	F	S
①	2	3	4	5	6	7
⑧	9	10	11	12	13	14
⑮	16	17	18	19	20	21
⑫	<b>23</b>	<b>24</b>	<b>25</b>	⑫	<b>27</b>	<b>28</b>
⑫	<b>30</b>					

## DECEMBER

S	M	T	W	T	F	S
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
⑥	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
⑬	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>
⑫	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	⑫	⑫
⑫	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>		

## JANUARY

S	M	T	W	T	F	S
					①	②
③	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
⑩	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
⑮	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>
⑫	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>
⑫						

## FEBRUARY

S	M	T	W	T	F	S
	1	2	3	4	5	6
⑦	8	9	10	11	12	13
⑭	15	16	17	18	19	20
⑮	⑫	23	24	25	26	27
⑫						

## MARCH

S	M	T	W	T	F	S
	1	2	3	4	5	6
⑦	8	9	10	11	12	13
⑭	15	16	17	18	19	20
⑫	22	23	24	25	26	27
⑫	29	30	31			

## APRIL

S	M	T	W	T	F	S
				1	2	3
④	5	6	7	8	9	10
⑪	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>
⑮	⑮	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
⑫	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	

## MAY

S	M	T	W	T	F	S
						<b>1</b>
②	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
⑨	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>
⑮	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>
⑫	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>
⑫	⑫					

## JUNE

S	M	T	W	T	F	S
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
⑥	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
⑬	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>
⑫	⑫	⑫	⑫	⑫	⑫	⑫
⑫	⑫	⑫	⑫			

## JULY

S	M	T	W	T	F	S
				①	②	③
④	⑤	⑥	⑦	⑧	⑨	⑩
⑪	⑫	⑬	⑭	⑮	⑯	⑰
⑮	⑮	⑮	⑮	⑮	⑮	⑮
⑫	⑫	⑫	⑫	⑫	⑫	⑫

## AUGUST

S	M	T	W	T	F	S
①	②	③	④	⑤	⑥	⑦
⑧	⑨	⑩	⑪	⑫	⑬	⑭
⑮	⑮	⑮	⑮	⑮	⑮	⑮
⑫	⑫	⑫	⑫	⑫	⑫	⑫
⑫	⑫	⑫				

Days on which Division A students are in college are indicated thus: 1 2 3

Days on which Division B students are in college are indicated thus: **1 2 3**

Sundays, holidays, and summer periods are indicated thus: ① ② ③

# *Calendar for the College Year, 1942-1943*

1942

- SEPTEMBER 2 *Wednesday.* Entrance condition examinations.
- SEPTEMBER 7 *Monday.* Labor Day. (College exercises omitted.)
- SEPTEMBER 10 *Thursday.* Registration and opening of college for freshmen. Students failing to register promptly on September 10 will be charged a late registration fee of five dollars (\$5.00).
- SEPTEMBER 14 *Monday.* Opening of college for Division A upperclassmen. Co-operative work period begins for Division B upperclassmen.
- OCTOBER 12 *Monday.* Columbus Day. (College exercises omitted.)
- NOVEMBER 23 *Monday.* Opening of college for Division B upperclassmen. Co-operative work period begins for Division A upperclassmen.
- NOVEMBER 25 *Wednesday.* College exercises omitted after 1:00 p.m.
- NOVEMBER 26 *Thursday.* Thanksgiving Day. (College exercises omitted.)
- DECEMBER 21 }  
JANUARY 2 } Vacation for freshmen.
- DECEMBER 24 *Thursday.* College exercises omitted after 1:00 p.m.
- DECEMBER 25 }  
DECEMBER 26 } *Friday and Saturday.* Celebration of Christmas.  
(College exercises omitted.)

1943

- JANUARY 1 } *Friday and Saturday.* Celebration of New Year's  
JANUARY 2 } Day. (College exercises omitted.)
- FEBRUARY 1 *Monday.* Second semester begins for freshmen and Division A upperclassmen. Co-operative work period begins for Division B upperclassmen.
- FEBRUARY 22 *Monday.* Washington's Birthday. (College exercises omitted.)
- APRIL 10 *Saturday.* College year ends for Division A upperclassmen.
- APRIL 12 *Monday.* Second semester begins for Division B upperclassmen. Co-operative work period begins for Division A upperclassmen.
- APRIL 19 *Monday.* Patriots' Day. (College exercises omitted.)
- MAY 29 *Saturday.* College year ends for freshmen.
- MAY 31 *Monday.* Observation of Memorial Day. (College exercises omitted.)
- JUNE 19 *Saturday.* College year ends for Division B upperclassmen.
- SEPTEMBER 6 *Monday.* Labor Day. (College exercises omitted.)
- SEPTEMBER 9 *Thursday.* Registration and opening of college for freshmen. Students failing to register promptly on September 9 will be charged a late registration fee of five dollars (\$5.00).
- SEPTEMBER 13 *Monday.* Opening of college year 1943-1944.



# The University Corporation

ROBERT GRAY DODGE  
*Chairman*

FRANK LINCOLN RICHARDSON  
*Vice-Chairman*

CARL STEPHENS ELL  
*President of the University*

GALEN DAVID LIGHT  
*Secretary and Treasurer*

JOSEPH FLORENCE ABBOTT  
CHARLES FRANCIS ADAMS  
WILMAN EDWARD ADAMS  
ROGER AMORY  
HENRY NATHANIEL ANDREWS  
ROBERT BALDWIN  
ARTHUR ATWOOD BALLANTINE  
GEORGE LOUIS BARNES  
THOMAS PRINCE BEAL  
FARWELL GREGG BEMIS  
HENRY GODDARD BRADLEE  
PAUL CODMAN CABOT  
WINTHROP L. CARTER  
WALTER CHANNING  
WILLIAM CONVERSE CHICK  
EVERETT AVERY CHURCHILL  
PAUL FOSTER CLARK  
SEARS B. CONDIT  
ALBERT MORTON CREIGHTON  
ERNEST BLANEY DANE  
WILLIAM JAMES DAVIDSON  
JAMES DEAN  
PAUL AUGUSTUS DRAPER  
CHARLES FRANCIS EATON  
LINDSAY ELLMS  
JOSEPH BUELL ELY  
JOHN WELLS FARLEY  
FREDERIC HAROLD FAY  
ALLAN FORBES  
EDWARD J. FROST  
FRANKLIN WILE GANSE  
HARVEY DOW GIBSON  
MERRILL GRISWOLD  
HENRY INGRAHAM HARRIMAN  
CHANDLER HOVEY  
HOWARD MUNSON HUBBARD  
MAYNARD HUTCHINSON  
ARTHUR STODDARD JOHNSON

HALFDAN LEE  
EDWARD ABBOTT MACMASTER  
JOHN RUSSELL MACOMBER  
JOSEPH PATRICK MANNING  
HAROLD FRANCIS MASON  
JAMES FRANKLIN McELWAIN  
HUGH DEAN McLELLAN  
FRED LESTER MORGAN  
IRVING EDWIN MOULTROP  
CLARENCE LUCIAN NEWTON  
OLAF OLSEN  
AUGUSTIN HAMILTON PARKER, JR.  
GEORGE EDWIN PIERCE  
ROGER PIERCE  
MATTHEW POROSKY  
FREDERICK SANFORD PRATT  
HARRY WENDELL PROUT  
SIDNEY RABINOVITZ  
STUART CRAIG RAND  
JAMES LORIN RICHARDS  
CHARLES MILTON ROGERSON  
ROBERT BILLINGS RUGG  
LEVERETT SALTONSTALL  
FRANK PALMER SPEARE  
RUSSELL HENRY STAFFORD  
FRANCIS ROBERT CARNEGIE STEELE  
CHARLES STETSON  
EARL PLACE STEVENSON  
ROBERT TREAT PAINE STORER  
FRANK HORACE STUART  
EDWARD WATSON SUPPLE  
MAHLON EDWARD TRAYLOR  
BAYARD TUCKERMAN, JR.  
ELIOT WADSWORTH  
EUSTIS WALCOTT  
EDWIN SIBLEY WEBSTER  
SINCLAIR WEEKS

## General University Committees

### *Executive Council*

CARL STEPHENS ELL, *Chairman*

EVERETT AVERY CHURCHILL

GALEN DAVID LIGHT

### *University Cabinet*

CARL STEPHENS ELL, *Chairman*

EVERETT AVERY CHURCHILL

EDWARD SNOW PARSONS

WILLIAM THOMAS CLONEY, JR.

JOHN BUTLER PUGSLEY

CHARLES WILLIAM HAVICE

CHARLES HENRY SAMPSON

ASA SMALLIDGE KNOWLES

MILTON JOHN SCHLAGENHAUF

WILFRED STANLEY LAKE

SYDNEY KENNETH SKOLFIELD

JAMES WALLACE LEES

EBEN OSWELL SMITH

GALEN DAVID LIGHT

J. KENNETH STEVENSON

HAROLD WESLEY MELVIN

WILLIAM CROMBIE WHITE

WINTHROP ELIOT NIGHTINGALE

RUSSELL WHITNEY

FRANK GIVEN AVERILL, *Secretary*

### *Administrative Committee*

EVERETT AVERY CHURCHILL, *Chairman*

FRANK GIVEN AVERILL

MILTON JOHN SCHLAGENHAUF

GALEN DAVID LIGHT

WILLIAM CROMBIE WHITE

### *Library Committee*

EVERETT AVERY CHURCHILL, *Chairman*

ASA SMALLIDGE KNOWLES

MYRA EDNA WHITE

WILFRED STANLEY LAKE

WILLIAM CROMBIE WHITE

RUSSELL WHITNEY

## General Officers of the University

CARL STEPHENS ELL, A.B., M.S., Ed.M., Sc.D. Office 186 Richards Hall	<i>President of the University</i> Res. 21 Beaumont Ave., Newtonville
FRANK PALMER SPEARE, M.H., LL.D.	<i>President Emeritus</i> Res. 90 Commonwealth Ave., Boston
EVERETT AVERY CHURCHILL, A.B., Ed.D. Office 138 Richards Hall	<i>Vice President of the University</i> Res. 48 Long Ave., Belmont
GALEN DAVID LIGHT, A.B. Office 115 Richards Hall	<i>Secretary-Treasurer of the University</i> Res. 3 Preble Gardens Rd., Belmont

## Administrative Officers and Staff of the Day Colleges

### Administrative Officers

WILLIAM CROMBIE WHITE, S.B., Ed.M. Office 152 Richards Hall	<i>Director of Day Colleges and Acting Dean of the College of Engineering</i> Res. 30 Summit Rd., Wellesley
ASA SMALLIDGE KNOWLES, A.B., M.A. Office 352 East Building	<i>Dean of the College of Business Administration</i> Res. 41 Louise Rd., Belmont
WILFRED STANLEY LAKE, A.B., M.A., Ph.D. Office 452 East Building	<i>Dean of the College of Liberal Arts</i> Res. 59 Hinckley Rd., Waban
HAROLD WESLEY MELVIN, A.B., M.A. Office 256 Richards Hall	<i>Dean of Students</i> Res. 44 Houston Ave., Milton
RUDOLPH MAGNUS MORRIS, S.B., Ed.M. Office 153 Richards Hall	<i>Secretary of the Faculty</i> Res. 99 Knollwood Rd., Squantum
WINTHROP ELIOT NIGHTINGALE, A.B., S.B., Ed.M. Office 253 Richards Hall	<i>Director of Co-operative Work</i> Res. 136 Dickerman Rd., Newton Hlds.
EDWARD SNOW PARSONS, S.B., Ed.M. Office 355 Richards Hall	<i>Director of Student Activities</i> Res. 19 Hardy Ave., Watertown
JOHN BUTLER PUGSLEY, A.B. Office 254 Richards Hall	<i>Registrar</i> Res. 23 Hardy Ave., Watertown
MILTON JOHN SCHLAGENHAUF, A.B., B.D., M.A. Office 150 Richards Hall	<i>Director of Admissions</i> Res. 96 Blakely Rd., Medford Telephone Mystic 6148-M
ARTHUR ANDREW VERNON, S.B., M.S., Ph.D. Office 425 Richards Hall	<i>Director of Graduate Study</i> Res. 14 Standish St., Newton Hlds.

### Administrative Staff

FRANK GIVEN AVERILL, A.B. Office 139 Richards Hall	<i>Director of the Development Program</i> Res. 90 Fairbanks Ave., Wellesley Hills
WILLIAM THOMAS CLONEY, JR., A.B. Office 354 Richards Hall	<i>Director of the Publicity Bureau</i> Res. 30 Lantern Lane, Milton
ALBERT ELLSWORTH EVERETT, S.B., M.B.A. Office 253 Richards Hall	<i>Co-ordinator of Co-operative Work</i> Res. 4 Crown St., Auburndale
DAISY MILNE EVERETT Office 115 Richards Hall	<i>Assistant Treasurer</i> Res. 1095 Highland Ave., Needham Heights



GEORGE RAYMOND FENNELL, S.B., M.B.A. Office 150 Richards Hall	<i>Assistant Director of Admissions</i> Res. 42 Fremont Ave., Everett Telephone: Everett 1172-W
MARY B. FOOR Office 41 Richards Hall	<i>Manager of Bookstore</i> Res. 32 Milton Rd., Brookline
CHARLES WILLIAM HAVICE, A.B., M.A., S.T.B., Ph.D. Office 357 Richards Hall	<i>Dean of Chapel</i> Res. 83 Franklin St., So. Braintree
FREDERICK ROBERT HENDERSON, S.B., M.S. Office 153 Richards Hall	<i>Assistant to the Dean of Engineering</i> Res. 223 Park Drive, Boston
PHYLLIS CHAMBERS HOWE Library, East Building	<i>Assistant Librarian</i> Res. 52 Westland Ave., Boston
HENRY ARTHUR KONTOFF, M.D. Office 479 Beacon St., Boston	<i>College Physician</i> Res. Overlook Park, Newton Centre
DONALD HERSHEY MACKENZIE, S.B., Ed.M. Office 355 Richards Hall	<i>Assistant to the Director of Student Activities</i> Res. 34 Exeter St., Wollaston
JOHN CHRISTIE MORGAN, S.B. Office 253 Richards Hall	<i>Co-ordinator of Co-operative Work</i> Res. 24 Walker St., Newtonville
VERNER OLOF NELSON Office 105 South Building	<i>Co-ordinator of Co-operative Work</i> Res. 60 Birchcliff Rd., East Weymouth
RUDOLF OSCAR OBERG, S.B., Ed.M. Office 253 Richards Hall	<i>Alumni Executive Secretary</i> Res. 37 Walker St., Atlantic
ELLIS MERTON PURINTON, B.B.A. Office 253 Richards Hall	<i>Co-ordinator of Co-operative Work</i> Res. 7 Clark Ave., Beverly
J. KENNETH STEVENSON, B.C.S. Office 136 Richards Hall	<i>Assistant to the Vice President</i> Res. 101 Goden St., Belmont
GEORGE WESLEY TOWLE, S.B. Office 253 Richards Hall	<i>Co-ordinator of Co-operative Work</i> Res. 23 Hilltop Ave., Lexington
GRACE LISCOM WATKINS Library, East Building	<i>Assistant Librarian</i> Res. 76 Glendale St., Dorchester
MYRA EDNA WHITE Library, East Building	<i>Librarian</i> Res. 118 Hemenway St., Boston
CYNTHIA WORT Library, East Building	<i>Assistant Librarian</i> Res. 82 Thorndike St., Brookline

### Office and Secretarial Staff

FLORENCE BURTON AVELLAR <i>Secretary to the Treasurer of the University—116R</i>	70 Fenway, Boston
MABEL ELLEN BEAN <i>Secretary to the Assistant to the Vice President—136R</i>	61 Quint Ave., Allston
JUNE BRAGG <i>Registrar's Office—254R</i>	21 Forsyth St., Boston
FLORENCE DOROTHY CARLSON <i>Secretary to the Director of Student Activities—355R</i>	10 Pearl St., Dedham
PRISCILLA SPEARE COLLINS <i>Secretary to the Dean of Students—256R</i>	19A Forest St., Cambridge
VIRGINIA CUSHING DARLING <i>Purchasing Clerk, Treasurer's Office</i>	128 Chestnut St., Boston
MYRTLE CORKISH DONOHUE <i>Secretary to the Dean of the College of Business Administration—352E</i>	266 Brookline Ave., Boston
THELMA GERTRUDE DUNN <i>Bookkeeper, Treasurer's Office</i>	30 Freeman Place, Needham

RUTH PHILLIPS FIOTT Admissions Office—151R	173 Marianna St., East Lynn
MILDRED CURTIS GARFIELD Financial Secretary to the Director of Day Colleges—152R	87 St. Stephen St., Boston
EDNA JANE GARRABRANT Secretary to the Director of Co-operative Work—253R	8 Maynard St., Arlington
RUTH GIBSON Secretary to the Secretary of the Faculty—153R	14 Avon Rd., Watertown
BARBARA MARY GRIEM Admissions Office—151R	57 Grandview Rd., Arlington
PRISCILLA HOPKINS Secretary, Treasurer's Office	223 Beacon St., Boston
ELSIE HINCKLEY HUNT Secretary to the Director of Admissions—150R	100 Linden St., Allston
JANE MCFARLAND HUTCHINS Student Union Office—357R	194 Beacon St., Boston
VERA LOUISE JENKINSON Admissions Office—150R	22 Hillside Ave., Arlington
BARBARA KNIGHT Secretary to the Registrar—254R	254 Clifton St., Malden
HELEN LOUISE KOLDERUP Cashier—Central Offices of the University	14 Holden Rd., Belmont
PATRICIA DORA KROUSE Secretary, Central Offices of the University	183 Beacon St., Boston
ELISA KUIVANEN Co-operative Work Office—253R	161 Beacon St., Boston
VIRGINIA E. LONG Admissions Office—151R	Franklin Square House, Boston
ALICE ADA MACKENZIE Secretary to the Director of the Development Program—139R	66 Mayfair Drive, Westwood
JULIA HARRIET MASLEN Secretary to the President—186R	17 Forsyth St., Boston
DOROTHY BRETT MASON Registrar's Office—254R	42 Patten St., Jamaica Plain
DOROTHY MILNE MURRAY Secretarial Assistant—152R	204 Fair Oak Park, Needham
ALYCE ANN NICHOLS Bookkeeper, Treasurer's Office	507 Chestnut St., Needham
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DOROTHY L. PEPPARD Student Activities Office—355R	7 Gray Circle, Arlington
ELIN VICTORIA PETERSON Secretary to the Vice President—138R	86 Callender St., Dorchester
CAROLINE FRANCES PETTINGELL Bookkeeper, Registrar's Office—254R	1654 Massachusetts Ave., Cambridge
MARJORIE GRAFFTE PROUT Secretary to the President—184R	1179 Boylston St., Boston
MADelyn EDYTHE RALPH Secretary to the Director of Day Colleges—152R	42 Sylvan Circle, Lynnfield
PHYLLIS E. WALTER Secretary to the Dean of the College of Liberal Arts—452E	45 Carlton St., Brookline
CHARLOTTE WATERMAN Office of the Director of the Development Program—139R	18 Ethel St., Roslindale

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MILTON J. SCHLAGENHAUF	

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STANLEY G. ESTES	ROLAND G. PORTER
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## Professors

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## Convocation Lecturers

BANCROFT BEATLEY  
PRESIDENT, SIMMONS COLLEGE  
*"The College and Vocational Education"*

HORACE T. CAHILL  
LIEUTENANT GOVERNOR OF THE COMMONWEALTH  
*"The Challenge to American Citizenship"*

ROBERT P. TRISTRAM COFFIN  
AUTHOR, LECTURER  
*"What Poems Are"*

J. ANTON DE HAAS  
PROFESSOR OF INTERNATIONAL RELATIONSHIPS, HARVARD UNIVERSITY  
*"International Affairs"*

GEORGE H. EDGELL  
DIRECTOR, BOSTON MUSEUM OF FINE ARTS  
*"Recent Museum Accessions"*

H. V. KALTENBORN  
NEWS COMMENTATOR  
*"Kaltenborn Edits the News"*

HARRY A. OVERSTREET  
PROFESSOR EMERITUS, COLLEGE OF THE CITY OF NEW YORK  
*"Ten Ways to Reach Wrong Conclusions"*

G. BROMLEY OXNAM  
BISHOP, METHODIST CHURCH  
*"A Date with the World"*

CLAYTON F. MUGRIDGE  
MANAGER, INDUSTRIAL RELATIONS, EAGLE PENCIL COMPANY  
*"Leadership's Challenge to Youth"*

JAMES H. POWERS  
OF THE BOSTON GLOBE EDITORIAL STAFF  
*"The Engineer in the New World"*

CLARENCE R. SKINNER  
DEAN, TUFTS SCHOOL OF RELIGION  
*"The Old Problem of Evil"*

KENNETH C. M. SILLS  
PRESIDENT, BOWDOIN COLLEGE  
*"Students in a Changing World"*

RALPH W. SOCKMAN  
MINISTER, CHRIST CHURCH, NEW YORK CITY  
*"The New Patriotism"*

EDWARD A. WEEKS, JR.  
EDITOR, THE ATLANTIC MONTHLY  
*"An Editor Faces an Angry World"*

## *Chapel Preachers*

DR. CHARLES N. ARBUCKLE  
MINISTER, FIRST BAPTIST CHURCH, NEWTON

DR. RICHARD H. BENNETT  
MINISTER, PAYSON PARK CHURCH, BELMONT

DR. EDWIN PRINCE BOOTH  
PROFESSOR OF CHURCH HISTORY, BOSTON UNIVERSITY

DR. HOWARD J. CHIDLEY  
MINISTER, FIRST CONGREGATIONAL CHURCH, WINCHESTER

REVEREND ROBERT WOOD COE  
MINISTER, LEYDEN CONGREGATIONAL CHURCH, BROOKLINE

DR. FRANK E. DUDDY  
MINISTER, NORTH CONGREGATIONAL CHURCH, CAMBRIDGE

DR. NEWTON C. FETTER  
MINISTER TO BAPTIST STUDENTS IN GREATER BOSTON

DR. C. LESLIE GLENN  
MINISTER, CHRIST CHURCH, CAMBRIDGE

REVEREND WILLIAM H. GYSAN  
MINISTER TO UNITARIAN STUDENTS IN GREATER BOSTON

DR. CHARLES W. HAVICE  
EXECUTIVE SECRETARY, NORTHEASTERN STUDENT UNION

DR. FRANK JENNINGS  
EXECUTIVE SECRETARY, MASSACHUSETTS COUNCIL OF CHURCHES, BOSTON

REVEREND CARL H. KOPF  
MINISTER, MOUNT VERNON CHURCH, BOSTON

DR. ASHLEY D. LEAVITT  
MINISTER, HARVARD CONGREGATIONAL CHURCH, BROOKLINE

DR. ELMER A. LESLIE  
PROFESSOR OF HEBREW AND OLD TESTAMENT LITERATURE, BOSTON UNIVERSITY

DR. JOSHUA L. LIEBMAN  
RABBI, TEMPLE SINAI, BOSTON

DR. SAMUEL M. LINDSAY  
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REVEREND SAMUEL H. MILLER  
MINISTER, OLD CAMBRIDGE BAPTIST CHURCH, CAMBRIDGE

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MINISTER, EMMANUEL CHURCH, BOSTON

DR. PALFREY PERKINS  
MINISTER, KING'S CHAPEL, BOSTON

FATHER THOMAS R. REYNOLDS  
PRIEST, ST. MATTHEW'S CHURCH, DORCHESTER

DR. HENRY K. SHERRILL  
BISHOP, EPISCOPAL CHURCH

DR. DAVID D. VAUGHAN  
PROFESSOR OF SOCIAL ETHICS, BOSTON UNIVERSITY



## NORTHEASTERN UNIVERSITY

*General Statement*

NORTHEASTERN UNIVERSITY is incorporated as a philanthropic institution under the General Laws of Massachusetts. The State Legislature, by special enactment, has given the University general degree granting powers.

The Corporation of Northeastern University consists of men who occupy responsible positions in business and the professions. This Corporation elects from its membership a Board of Trustees in whom the control of the institution is vested. The Board of Trustees has four standing committees: (a) an Executive Committee which serves as an Ad Interim Committee between the regular meetings of the Board of Trustees and has general supervision of the financial and educational policies of the University; (b) a Committee on Housing which has general supervision over the buildings and equipment of the University; (c) a Committee on Funds and Investments which has the responsibility of administering the funds of the University; (d) a Development Committee which is concerned with furthering the development plans of the University.

Founded in 1898, Northeastern University, from the outset, had as its dominant purpose the discovery of human and social needs and the meeting of these needs in distinctive and highly serviceable ways. While subscribing to the most progressive educational thought and practice, the University has not duplicated the programs of other institutions but has sought "to bring education more directly into the service of human needs."

With respect to program, Northeastern has limited itself:

- To offering, in its several schools, basic curricula from which non-essentials have been eliminated,
- To effective teaching,
- To advising and guiding students,
- To giving students the chance to build well-rounded personalities through a balanced program of extra-curricular activities.

The Northeastern Plan of Education is especially designed for the student who must earn while he learns. In the main, it consists of two definite types of education:

- Co-operative Education by Day,
- Adult Education by Night.

The plan has been developed in such a way that experience in jobs with pay is utilized to help boys of limited financial resources secure an education and at the same time gain the maximum

educational benefit from their practical experience. So far as the New England States are concerned, Northeastern University is the only institution whose day colleges, other than the School of Law, are conducted under the Co-operative Plan.

The several schools and programs of the University are operated either under the name "Northeastern University" or by its affiliated schools—the Lincoln Schools and The Huntington Day School for Boys. The following is a brief outline of the principal types of educational opportunities offered.

1. In the field of Co-operative Education there are three day colleges — the College of Liberal Arts, the College of Engineering, and the College of Business Administration. All of these colleges offer five-year curricula. The College of Liberal Arts offers majors in the usual fields of the arts and the sciences leading to the degrees of Bachelor of Arts and Bachelor of Science. The College of Engineering, one of the largest engineering colleges in the United States, has curricula in Civil, Mechanical (with Air-Conditioning and Aeronautical options), Electrical, Chemical, and Industrial Engineering. The College of Business Administration has curricula in Accounting, Banking and Finance, Marketing and Advertising, Journalism, Public Administration, and Industrial Administration. The College of Engineering and the College of Business Administration confer the degree of Bachelor of Science with specification indicating the field of specialization. The Co-operative Plan under which all of these day colleges operate enables the student to alternate regular periods of classroom instruction with supervised employment in an industrial or commercial position, thus combining theory and practice in an exceedingly effective manner. Apart from the educational advantages of the Co-operative Plan is the opportunity for self-support while the student is pursuing his studies at Northeastern University. During the co-operative periods, students not only gain experience but are also paid for their services. Approximately three hundred business and industrial concerns co-operate with Northeastern University in making this program effective.
2. The School of Law conducts both a day and an evening undergraduate program which prepares for admission to the bar and for the practice of the law and leads to the degree of Bachelor of Laws. It also conducts a graduate program in the evening leading to the degree of Master of Laws.
3. The Adult Education Program has been developed in the evening work of the School of Law as indicated above, in

the School of Business, and in the evening courses of the College of Liberal Arts. The School of Business has curricula in Management — with Industrial and Merchandising majors, Accounting, Law and Business Management, and Engineering and Management. The School awards the Bachelor of Business Administration degree with specification and the Bachelor of Commercial Science degree in Law and Business Management. The College of Liberal Arts offers an evening program the equivalent in hours to one-half of the requirements for the A.B. or S.B. degree, providing a general education and preparation for admission to the School of Law. The title of Associate in Arts is conferred upon those who complete this program.

4. In order that larger groups of men and women might be served through its evening schools, Northeastern University operates divisions of the School of Law and the School of Business in co-operation with the Young Men's Christian Association in Worcester and Springfield and of the School of Business in co-operation with the Providence Young Men's Christian Association. With the establishment of the divisions thorough-going methods of supervision were instituted and have been consistently followed and improved, with the result that the divisional work is conducted upon a highly efficient basis.
5. The Adult Education Program has also been developed through the Lincoln Schools, which are affiliated with and conducted by Northeastern University. The classes in these schools are held at convenient evening hours. The Lincoln Technical Institute offers curricula upon a college level in various phases of engineering leading to the title of Associate in Engineering; whereas the Lincoln Preparatory School, accredited by the New England College Entrance Certificate Board, prepares students for admission to college and offers other standard high school programs.
6. The Huntington Day School for Boys, also affiliated with and conducted by Northeastern University, is the outgrowth of a demand in the city of Boston for an urban preparatory school with high educational standards which would furnish thorough preparation for admission to the leading colleges and universities. While easily accessible to the various sections of Boston and to the suburbs, it has the facilities of a country day school and offers a country day school program. This School is one of the leading preparatory schools of the country.

# *Northeastern University and Affiliated Schools*

## *Statistical Summary*

1939-1940

	<i>Administrative Officers and Faculty</i>	<i>Students</i>
General Administration	9	
Northeastern University		
College of Liberal Arts		525
College of Engineering	108	1408
College of Business Administration		538
School of Law	46*	1204*
School of Business	102*	1709*
Evening Courses — College of Liberal Arts	11	117
Affiliated Schools		
Lincoln Technical Institute	37	585
Lincoln Preparatory School	20	422
Huntington Day School for Boys		
Regular Term	16	176
Summer Term	8	143
Total	357	6827
Less Duplicates	45	476
	312	6351

\*These figures include the administrative officers, faculties, and students of the Divisions of the University in Worcester, Springfield, and Providence.



## The Co-operative Plan

### *How It Works*

THE co-operative plan works in the following manner. Upper-classmen are divided into two nearly equal groups, one of which is called Division A and the other Division B. Each man is assigned a job with some business or industrial concern. So far as possible each man in one Division is paired with a man in the other Division, so that the two, by taking turns, may occupy one job throughout the entire year. In September the Division A student returns to the University for ten weeks of classroom work. At the end of that time he goes out to work ten weeks with a co-operating firm. His place at the University is then taken by his *alternate*, the corresponding Division B student. When ten weeks more have passed, the Division A man returns to college, and the Division B man returns to the co-operative job. The alternation of work and classroom study continues throughout the year so that an upperclassman has annually twenty weeks at college, twenty-six weeks at co-operative work, and six weeks of vacation.

### *Faculty Co-ordinators*

Students are assigned to a co-ordinator, who interviews them periodically during their freshman year for the purpose of determining their background, abilities, temperaments, and aptitudes. During these interviews the co-ordinator discusses various fields of activity and answers such questions as the students may have in regard to the many phases of business and industry. Each student is studied in the light of his physical condition, scholastic ability, and other factors affecting his probable success in vocational life. These interviews culminate in an agreement between the student and his co-ordinator regarding the field of co-operative work in which the student is to be placed. During his upperclass years the student continues to have frequent conferences with his co-ordinator regarding vocational adjustments and personal problems. In this way the progress of every student is observed and co-ordinated with his college work to the end that he may obtain maximum values from his training at Northeastern.

### *Placement*

The co-ordinator visits co-operating firms and arranges with them for the employment of the students under his charge. The range of opportunities available to Northeastern students is wide,



including practically all phases of industrial life. As a general rule, sophomores are placed upon routine and laborious jobs through which they may prove their fitness for more responsible work. The jobs upon which Northeastern students are employed are in no sense protected opportunities. They are regular jobs under actual business conditions and are held in competition with other sources of supply. The only special privilege accorded Northeastern students is that of attending college on the co-operative plan. The University expects every student to stand on his own feet while he is on co-operative work, and advancement to the more responsible jobs is based entirely upon merit.

### *Supervision and Guidance*

While the University does not adopt a paternal attitude toward co-operative work, it nevertheless assumes certain responsibilities toward students and co-operating firms. Co-ordinators visit each job in order that the employer may report upon the student's achievement and that necessary adjustments may be made. Co-ordinators supervise the assignment of students to various jobs and in conjunction with employers arrange for promotions and training schedules. Problems that arise on co-operative work are adjusted by common agreement of co-ordinator, student, and employer. In the event of special difficulties or dissatisfaction, the case may be adjusted by the Committee on Co-operative work, which comprises several members of the faculty.

Through a series of co-operative work reports prepared during their working periods, students are led to analyze their jobs and to develop a thoughtful and investigative attitude toward their working environment. A most important phase of co-operative work is the opportunity afforded for guidance by the frank discussion of actual problems encountered on the job. The intimate contact between co-ordinator and student is of great worth in helping the student to get the most value from each co-operative work assignment. While the University endeavors to provide every possible opportunity for its students, it expects them at the same time to take the initiative and to assume the responsibility involved in their individual development. To every student are available the counsel and guidance of the faculty, and every resource at its disposal. But the faculty does not coerce students who are uninterested or unwilling to think for themselves.

The co-operative plan is thus designed specifically to provide actual working conditions which afford the student practical experience, give meaning to his program of study, and train him in reliability, efficiency, and team work.

### *Correlation of Theory and Practice*

Co-operating companies employ the students in the various departments of their establishments. The training is thorough. To derive the greatest value from his co-operative work the student is advised to continue in the employ of his co-operating firm for at least one year after graduation, since certain types of work which would afford him valuable experience cannot be made available to him while he is alternating between work and study. Statistics compiled over a period of many years show that on the average about fifty per cent of each graduating class remain with co-operating employers after graduation.

### *Co-operative Work Reports*

The values to be derived from practical experience are further enhanced by required report writing. These co-operative work reports are written during the working periods by all co-operative students. A complete job analysis is required as the first report written on any new co-operative work assignment. Subjects of other reports are selected by the student after conference with his Co-ordinator of Co-operative Work, by whom they must be approved. The reports are designed to encourage observation and investigation on the part of the students and to help them to appreciate more fully the extent and value of their experience. These reports are carefully read by the Co-ordinator and are discussed with the student during the following college period. Exceptionally valuable results are obtained from these reports. The value derived must necessarily be directly proportional to the conscientious and intelligent concentration of effort by the student upon this phase of the work.

### *Co-operative Work Records*

Complete and detailed records are kept of the co-operative work of each student. They are based upon reports made by the employer at the end of each working period; upon occasional personal interviews between the employer and the Co-ordinator; and upon various evidences of the student's attitude toward all the phases of his co-operative work. It is not possible for the student to secure a degree unless this part of the curriculum is completed satisfactorily. These records of practical experience serve as a valuable future reference for the Alumni Placement Division of the Department.

### *Positions Available*

Because of uncertainties of business conditions, as well as other reasons beyond its control, the University cannot and does not guarantee to place students. Although the University in no way discriminates among students of various races and religions, considerable difficulty has been experienced in placing at co-operative work the members of certain racial groups and students who are physically handicapped. However, past experience has demonstrated that students who are willing and capable of adapting themselves to existing conditions are almost never without employment except in periods of severe industrial depression.

### *Earnings*

The rates of pay for students tend to be low because students are given the privilege of attending college on the Co-operative Plan and because effort is made to provide the student with the opportunity of being transferred, at reasonable intervals, from one department to another of the co-operating company. It should be understood that the primary purpose of the Co-operative Plan is training.

The minimum rate of pay will be governed to a very large extent by prevailing wages and hours laws. To assist the student in budgeting his expenses, however, he can plan in normal times on a weekly rate of \$14.

### *Location of Work*

It is the policy of the University to assign students to co-operative work within commuting distance of their homes. This is not always possible, however, and at times it may be necessary for students to live away from home in order to obtain satisfactory and desirable co-operative work assignments.

### *Types of Co-operative Work*

Insofar as possible students are placed at co-operative work in that general field for which they express preference, provided that aptitude, physical ability, temperament, and other personal qualities appear to fit them for this field. Usually students are placed first in the lower ranks of an organization where they may learn the fundamental requirements of the business.



For example, a student interested in manufacturing might be started as an operative on some machine in the plant. As his progress and other conditions warranted he would be transferred to other types of work such as shipping, inspecting, cost finding, adjusting complaints, or bookkeeping, and so on, so that in the course of his four years co-operative training he would have the opportunity to acquire a substantial background in at least some of the functions of factory administration. This progressive type of training is more readily obtained in the employ of one company. A change of company each year provides more a change of environment than a progression of experiences.

Engineering firms, manufacturing companies, public utilities, and many other types of enterprises are employing Northeastern students. In some cases definite training schedules have been established so as to permit the student one full year in each of several important departments.

### *Typical Co-operative Training Schedules*

These schedules are arranged with the basic idea of giving the student a comprehensive training through the several different departments, but must of necessity be varied in accordance with the needs of those departments.

#### BOSTON & MAINE RAILROAD CO.

- ONE YEAR — Erecting Shop
- ONE YEAR — Machine Shop
- ONE YEAR — General work in Machine Shop and Erecting Shop
- ONE YEAR — Mechanical Engineer's Dept.

#### BOSTON EDISON COMPANY

The schedule of the Boston Edison Company is divided into the following general classifications. Very few co-operating students obtain experience in all branches, but students progress from year to year in the respective branches as conditions require.

##### *Standardizing*

- (a) Testing and standardizing of electrical instruments
- (b) Miscellaneous standardization
- (c) Repairs on electrical instruments
- (d) Laboratory high voltage tests

##### *Steam Practice*

- (a) Turbine, engine and boiler tests
- (b) Instrument tests and repairs
- (c) Miscellaneous tests

*Electrical Testing*

- (a) Testing and repairing of electrical instruments in power stations and sub-stations
- (b) Cable tests
- (c) High voltage tests on apparatus and in the field
- (d) Checking up construction work
- (e) Miscellaneous electrical tests

*Chemical Engineering*

- (a) Fuel analysis
- (b) Miscellaneous tests and analysis of oils, water paints, and other materials

*Photography**Office Work*

## HUNT-SPILLER MANUFACTURING CORPORATION

ONE YEAR General laboratory and plant work, including preparation of samples

## Pyrometry

Use and care of metallurgical apparatus

ONE YEAR Complete analysis of coal, coke, limestone, sand, iron, soil, etc.

ONE YEAR Keeping of general metallurgical records, filing, and making of reports

ONE YEAR Analysis for combined, graphitic, and total carbon with a complete knowledge of a carbon combustion apparatus

## PEPPERELL MANUFACTURING COMPANY

ONE YEAR Stock Records

ONE YEAR Production Analysis

ONE YEAR Inventory Control



## General Information

### College Expenses

#### Tuition

THE tuition for all curricula in the Day Colleges is \$250 per year, or \$125 per term. Certain fees and deposits are also required as specified in the following paragraphs. A complete statement of tuition and fee payments is given on page 28.

Students who carry academic loads of greater or less than normal amount may pay their tuition on a semester hour basis.

#### University Fee

All students are charged a University Fee of twenty-four dollars (\$24) each year. This fee is payable in two installments: fourteen dollars (\$14) with the first payment of tuition and ten dollars (\$10) with the second payment of tuition. These charges are included in the schedule of payments on page 28.

The University Fee covers library, laboratory, materials charges, and similar items for which separate fees are frequently charged by other colleges and universities. It is payable by all students regardless of the curriculum in which they are enrolled.

#### Student Activities Fee

Each student in the Day Colleges is charged a student activities fee of sixteen dollars (\$16). This fee is payable at the time of registration and is included in the schedule of payments on the following page. This fee supports in part certain student activities, and includes membership in the *Northeastern University Athletic Association*, *The Northeastern Student Union* and subscription to *The Northeastern News*, the college paper.

The services of a physician are also available for all students under this fee. Minor ailments are treated by the college health officers without additional charge. If the student shows signs of more serious illness, he is immediately advised to consult a specialist or return to his home, where he can get further treatment.

#### Laboratory Deposit

*(Applies only to students taking chemical laboratory work)*

All students taking laboratory work in chemistry are required to make a deposit from which deductions are made for breakage, chemicals, and destruction of apparatus in the laboratory. Any unused portion of this deposit will be returned to the student at the

end of the college year. If the charge for such breakage, chemicals, or destruction of apparatus is more than the sum deposited, the student will be charged the additional amount.

Freshmen make a laboratory deposit of ten dollars (\$10) with their first tuition payment at the beginning of the year; upper-classmen make a laboratory deposit of ten dollars (\$10) at the beginning of each term.

### *Schedule of Payments for Freshmen*

<i>Date Due</i>	<i>Amount</i>	
September 10, 1942	Tuition	\$125.00
	Fees	30.00
	*Chem. Lab. Deposit	10.00
		<hr/> \$165.00
February 8, 1943	Tuition	\$125.00
	Fees	10.00
		<hr/> \$135.00

### *Schedule of Payments for Upperclassmen*

<i>Division A</i>		
**September 14, 1942	Tuition	\$125.00
	Fees	30.00
		<hr/> \$155.00
**February 1, 1943	Tuition	\$125.00
	Fees	10.00
		<hr/> \$135.00
<i>Division B</i>		
**November 23, 1942	Tuition	\$125.00
	Fees	30.00
		<hr/> \$155.00
**April 12, 1943	Tuition	\$125.00
	Fees	10.00
		<hr/> \$135.00

### *Deferred Payment Fee*

There will be a \$2.00 deferred payment fee added to all bills which are not paid by the Saturday following the date on which payments fall due. When further extensions of time are given on payments which have been previously deferred, an additional \$2.00 fee will be charged for each extension.

Failure to make the required payments on time, or to arrange for such payments, is considered sufficient cause to bar the student from classes or suspend him from co-operative work until the matter has been adjusted with the Registrar.

\*Not required of students who do not take chemistry.

\*\*Students taking chemical laboratory work pay a deposit of \$10 additional.

### *Late Registration Fee*

A fee of \$5.00 will be charged for failure to register in accordance with prescribed regulations on the dates specified in the college calendar.

### *Graduation Fee*

A fee of ten dollars (\$10) covering graduation is required by the University of all candidates for a degree. This fee must be paid before the end of the seventh week of the second term in the senior year.

### *Payments*

All payments should be made at the treasurer's office which is located on the first floor of Richards Hall. Checks should be made payable to Northeastern University.

### *Refunds*

The University assumes the obligation of carrying the student throughout the year. Instruction and accommodations are provided on a yearly basis; therefore, no refunds are granted except when students are compelled to withdraw on account of personal illness.

### *Expenses*

The following tables, compiled from expense returns submitted by the student body, give an idea of freshman expenditures under ordinary conditions.

#### *Estimated College Expenses for a Freshman*

Application Fee . . . . .	\$ 5.00
Tuition . . . . .	250.00
University Fee . . . . .	24.00
Chemical Laboratory Deposit . . . . .	10.00
Student Activities Fee . . . . .	16.00
Books and Supplies . . . . .	35.00
	<hr/>
	\$340.00

*Estimated Living Expenses Per Week for a Freshman  
Residing Away from Home*

Room Rent.....	\$ 4.00
Board.....	7.00
Laundry.....	1.00
Incidentals.....	2.00
	\$14.00

The figures given above are approximate and may not exactly apply to any one student; however, they will be found to represent fairly well the expense of a freshman who lives comfortably but without extravagance.

*Textbooks and Supplies*

The Northeastern University Bookstore, located in the Basement of Richards Hall, is a department of the University and is operated for the convenience of the student body. All books and supplies which are required by the students for their work in the University may be purchased at the Bookstore.

A Northeastern Bookstore Discount Card is issued to every Day College student at the time of registration and entitles him to a ten per cent discount on all Day College textbooks which he purchases for his own use while in school.

The ten per cent discount does not apply on equipment, supplies or novelties. It is the policy of the bookstore, however, to stock these materials and to sell them at the lowest possible prices.

*Part-Time Work*

Students who find it necessary to accept part-time jobs while attending college may obtain such work through the Director of Co-operative Work.

No student is justified in assuming that the University will take care of his expenses or guarantee to supply him with work sufficient to meet all his needs.

A student should have available a reserve fund adequate to provide for immediate needs and unexpected contingencies. This should ordinarily amount to at least the first year's tuition plus the student activity and other fees, room rent, and board for several weeks, or a total of about \$500.



## *Grades and Examinations*

### *Examinations*

Examinations covering the work of the term are usually held at the close of each term. Exceptions may be made in certain courses where, in the opinion of the instructor, examinations are not necessary.

Condition examinations are given in most subjects once each year without charge. Condition examinations are not given for laboratory courses.

Special examinations may be arranged for only in the Registrar's office, and for all such examinations the University requires the payment of a special fee of five dollars (\$5.00).

### *Grades*

A student's grade is officially recorded by letters, as follows:

- A superior attainment
- B above average attainment
- C average attainment
- D lowest passing grade, poor attainment (the faculty will accept only a limited amount of grade D work toward the Bachelor's degree)
- F failure, removable by condition examination
- FF complete failure, course must be repeated in class
- I incomplete, used for intermediate grades only to signify that the student has not had time to make up work lost through excusable enforced absence from class
- L used in all cases of the removal of a failure by condition examination or by attendance at summer term.

A student who does not remove a condition before that course is again scheduled, a year later, must repeat the course. A condition in more than one subject may involve the loss of assignment to co-operative work.

The responsibility for the removal of a condition rests with the student who is required to ascertain when and how the condition can be removed.

### *Dean's List*

A Dean's List, issued at the end of each term, contains the names of upperclass students who have an honor grade average in all subjects during the preceding period. Freshmen who achieve high scholastic standing are included on a Freshman Honor List,



which is published at the end of each grading period. No student under disciplinary restrictions is eligible for either of the honor lists.

### *Reports on Scholastic Standing*

Freshman reports are issued at the end of each grading period; upperclass reports, at the end of each term. In addition, a special report on review subjects pursued during the summer term will be issued immediately at its close. Questions relative to grades are to be discussed with the student's faculty adviser.

Students are constantly encouraged to maintain an acceptable quality of college work. Parents and students are always welcomed by the college officers and faculty advisers for conference upon such matters.

Parents or guardians will be notified whenever students are advised or required to withdraw from the University.

## *General Conduct*

### *Conduct*

It is assumed that students come to the University for a serious purpose and that they will cheerfully conform to such regulations as may from time to time be made. In case of injury to any building or to any of the furniture, apparatus, or other property of the University, the damage will be charged to the student or students known to be immediately concerned; but if the persons who caused the damage are unknown, the cost for repairs may be assessed equally upon all the students of the University.

Students are expected to observe the accepted rules of decorum, to obey the regulations of the University, and to pay due respect to its officers. Conduct inconsistent with the general good order of the University or persistent neglect of work may be followed by dismissal; if the offense be a less serious one, the student may be placed upon probation. The student so placed upon probation may be dismissed if guilty of any further offense.

It is desired to administer the discipline of the University so as to maintain a high standard of integrity and a scrupulous regard for truth. The attempt of any student to present as his own any work which he has not performed, or to pass any examination by improper means, is regarded as a most serious offense and renders the offender liable to immediate expulsion. The aiding and abetting of a student in any dishonesty is also held to be a grave breach of discipline.

### *Scholastic Year for Seniors*

Seniors of either division who are candidates for a degree in the current year must have completed all academic work, class assignments, theses, regular and special examinations, before twelve o'clock noon of the Saturday next following the close of recitations for seniors.

### *Attendance*

Students are expected to attend all exercises in the subjects they are studying unless excused in advance. Exercises are held and students are expected to devote themselves to the work of the University between 9:00 A.M. and 5:00 P.M., except for a lunch period, on every week day except Saturday. Saturday classes are held only between 9:00 A.M. and 1:00 P.M.

No cuts are allowed. A careful record of each student's attendance upon class exercises is kept. Absence from regularly scheduled exercises in any subject will seriously affect the standing of the student. It may cause the removal of the subject or subjects from his schedule. If he presents a reasonable excuse for the absence, however, he may be allowed to make up the time lost and be given credit for the work; but he must complete the work at such time and in such manner as his instructor in the course may designate.

Laboratory work can be made up only when it is possible to do so during hours of regularly scheduled instruction.

Absences from exercises immediately preceding or following a recess are especially serious and entail severe penalties.

Attendance at all mass meetings of the student body is compulsory. Exceptions to this rule are made only when the student has received permission from the Director of Student Activities previous to the meeting from which he desires to be absent.

## *Student Housing*

### *Housing Regulations*

The University endeavors to exercise due consideration and care for the student's welfare while he is in residence. This necessitates the adoption of the rules and regulations presented herewith.

1. Assignments will be made when the student registers.
2. Students may inspect rooms before accepting an assignment; after reaching a decision students must notify the office of the Registrar, 254R.

3. Students who accept room assignments must retain them for the period of their residence, unless given permission by the Registrar to change.

4. Students are not permitted to live in unsupervised quarters. Under no conditions are groups of students permitted to lease apartments.

5. Students are not permitted to engage rooms without the prior approval of the University. Those violating this rule will be required to give up such rooms immediately and will be assigned by the University to approved quarters.

6. Violation of any of the above rules is considered a breach of discipline and will be dealt with accordingly.

### *Dormitories*

At present the University does not maintain dormitories. Provision, however, is made for students to secure rooms in the vicinity. Many freshmen prefer to take room and board at the fraternity houses, which are all supervised by the University through faculty advisers. For information relative to such housing write the Director of Admissions.

Rooms in the dormitory of the Huntington Avenue Branch of the Boston Y.M.C.A. may be secured only through the Housing Department of the Y.M.C.A. The applicant must present himself in person to a representative of the Department before assignment will be made.

Applicants desiring to room in the Association dormitory are advised to write the Housing Department of the Huntington Avenue Branch, 316 Huntington Avenue, Boston, Massachusetts.

## *Freshman Counseling*

### *Freshman Orientation Period*

In order that freshmen may be ready to pursue their academic work with greater composure and be somewhat acclimated before the beginning of scholastic work, three or four days prior to the first term are devoted to a freshman orientation period. During this time freshmen are advised as to choice of program, and assisted in every way possible in order that they may be prepared to begin serious study and work on the first day of the college term. All freshmen are required to attend all exercises at the University scheduled during the orientation period.

An optional feature of the orientation program is the freshman camp conducted under the auspices of the Student Union. The camp is planned particularly for out-of-town students, although commuters are welcomed. It aims at providing a stimulating and wholesome environment under vacation conditions in which the new men may become acquainted with one another and with members of the faculty. The camp site on Lake Massapoag, in the northern part of Massachusetts, is admirably equipped for this purpose, having ample facilities for baseball, basketball, tennis, boating and swimming. The cost of the two days at camp is nominal, and most freshmen avail themselves of this opportunity for recreation prior to the beginning of the college year.

### *Physical Examination*

All freshmen receive a thorough physical examination at the University during the orientation period. All students are expected to report promptly at the appointed time for examination. Those who fail to appear at the appointed time will be charged a special examination fee of two dollars (\$2.00).

### *Freshman Counselors*

At the time of his matriculation each freshman is assigned to a personal counselor, a member of the faculty, who serves as an interested and friendly counselor during the perplexing period of transition from school to college. A personal record card is prepared for each student, containing certain pertinent data from his preparatory school record, the report of his physical examination at Northeastern, his scores on psychological tests, the results of placement examinations, and any special notes which may be of significance in counseling work. The aim of the freshman counseling system is primarily to assist students in making an



effective start upon their programs and secondarily to acquire for the later use of guidance officers a fund of significant information relative to every freshman. Counseling is under the direction of the Dean of Students, assisted by a clinical psychologist, who handles the diagnosis and remedial treatment of difficult problem cases.

### *Individual Attention to Freshmen*

Not only is attention given to the scholastic problems of the student, but also to personal problems in which advice is needed and desired. The aim is to guide the student to the fullest possible personal development.

The college record of each student is carefully analyzed in the light of what could reasonably be expected of him, in view of his previous school record, his score on psychological tests, and all other factors in his situation. If he is not doing his best work, an investigation is made to determine and eliminate the causes. If he is doing as well as could be expected or better, he is encouraged to continue his efforts. In other words, each student is held to the most effective work possible, through advice, encouragement, and assistance.



## *Scholarships, Prizes and Awards*

### *Trustee Scholarships*

Established in 1928 by the Board of Trustees of Northeastern University. Each year the University grants in the three Day Colleges twenty-five full tuition scholarships to entering freshmen who have demonstrated throughout their preparatory or high school course superior scholastic attainment. For additional information relative to these scholarships communicate with the Director of Admissions. Applications for Trustees' Scholarships must be filed on or before May 15.

### *Charles Hayden Memorial Scholarships at Northeastern University*

Established in 1939 through the generosity of the Charles Hayden Foundation and subject to annual renewal. The Foundation, created by the will of the late Charles Hayden, an alumnus of the Boston English High School, offers annually a sum of money to be distributed as memorial scholarships at Northeastern University. The scholarships are awarded to worthy entering students whose parents are unable to finance the entire cost of their education. To be eligible for consideration a student must have graduated from the English High School or from one of the following high schools in Boston and its metropolitan area: Arlington, Belmont, Boston (Brighton, Charlestown, Commerce, Dorchester, East Boston, English, Hyde Park, Jamaica Plain, Mechanic Arts, Public Latin, Roslindale, Roxbury Memorial, South Boston), Braintree, Brookline, Cambridge (High and Latin, Rindge Technical), Canton, Chelsea, Dedham, Everett, Lexington, Malden, Medford, Melrose, Milton, Needham, Newton, North Quincy, Quincy, Revere, Somerville, Stoneham, Wakefield, Waltham, Watertown, Wellesley, Weston, Weymouth, Winchester, Winthrop. While the scholarships are designed primarily to assist students through their freshman year in college, the Foundation has set up a supplementary loan fund to make available limited assistance to meet exigencies which may arise in the upper class years. Each recipient of a Charles Hayden Memorial Scholarship is presented a properly endorsed certificate and is eligible for membership in the Charles Hayden Scholars Club of the University. Full particulars concerning these awards may be obtained from the Director of Admissions of Northeastern University.

### *Dean's List Scholarships*

Established in 1929. Annually at the Dean's List Dinner three scholarships of one hundred dollars each, known as the Dean's

List Scholarships, are presented to the students with the outstanding records in the sophomore, middler, and junior classes. These scholarships are applicable to the recipients' tuition the first term of the following year.

### *Dean's List Senior Letter*

Established in 1929. At the time of the award of the Dean's List Scholarships a Dean's List Senior letter is presented to the senior student who leads the seniors in the day colleges in scholastic achievement. The letter is a congratulatory one from the President of the University and is a coveted prize.

### *Sears B. Condit Honor Awards*

Established in 1940 through the generosity of Sears B. Condit. In the fall of the year at a University convocation Sears B. Condit Honor Awards, not less than ten in number, are awarded to outstanding students in the upper three classes of the College of Liberal Arts, the College of Business Administration, and the College of Engineering. Students who have received the Dean's List Scholarships are not eligible for one of these Honor Awards. Each award carries a stipend of not less than fifty dollars as well as a certificate of achievement.

### *Boston Society of Civil Engineers Scholarship in Memory of Desmond FitzGerald*

Established in 1931 by the Boston Society of Civil Engineers in memory of Desmond FitzGerald, a former president of the Society and an eminent hydraulic engineer with a distinguished record of service. The scholarship is subject to annual renewal. It has been awarded annually since 1931 to an outstanding Northeastern University senior or junior student in the Department of Civil Engineering of the College of Engineering. The presentation is made by the President of the Boston Society of Civil Engineers at a College of Engineering convocation in the spring of the year.

### *The Senate Award*

Established in 1932. The Senate, the honor society of the College of Engineering, offers annually a scholarship of one hundred dollars to the freshman in the college who has, during the previous year, made the highest scholastic record.

### *The Sigma Society Award*

Established in 1930. The Sigma Society, the honor society of the College of Business Administration, offers annually a scholarship of one hundred dollars to the freshman in the college who has, during the previous year, made the highest scholastic record.

### *The Academy Award*

Established in 1938. The Academy, the honor society of the College of Liberal Arts, offers annually a scholarship of one hundred dollars to the freshman in the college who has, during the previous year, made the highest scholastic record.

### *Henry B. Alvord Memorial Scholarship in Civil Engineering*

Established in 1940 in memory of the late Henry B. Alvord, Professor of Civil Engineering and Chairman of the Department for eighteen years. The award is made annually to a student graduating from an accredited secondary school who has demonstrated superior academic ability and gives promise of succeeding in civil engineering. The grant of two hundred and fifty dollars is made only to an entering freshman who is qualified for and plans to study civil engineering.

### *William J. Alcott Memorial Award*

Established in 1934 by members of the faculty and other friends to perpetuate the memory of William Jefferson Alcott, Jr., a brilliant member of the Department of Mathematics in Northeastern University from 1924 until his death in 1933. The Award is offered annually in the form of a prize purchased with the income to the fund for outstanding scholastic achievement during the preceding year, either in a particular field of interest or for a superior academic record.

### *Public Speaking Contest*

Established in 1922. Each spring the University conducts a Public Speaking Contest for which all students in the day colleges are eligible. Prizes of forty, thirty, twenty, and ten dollars respectively are awarded to the four winning speakers in a contest before the upperclass student body assembled in a general mass meeting. Speeches are original in nature and about ten minutes in length. The judges base their decision on appropriateness of subject, content, and delivery. Preliminary contests are held during the winter in each division.



## *Buildings and Facilities*

### *Boston — A Great Educational Center*

THE fact that Northeastern University is in Boston broadens the educational and cultural opportunities of its students.

Few other cities in the country are so rich in the finest elements of American life. Many of its historic buildings, such as the Old State House, Faneuil Hall, and the Old North Church, have become museums for the preservation of old documents, paintings, and other collections representative of early Colonial life. The Boston Public Library and the Museum of Fine Arts, both within a few blocks of the University Buildings, are widely noted for their treasures of literature and art. Even nearer to the University is Symphony Hall, home of the world-famous Boston Symphony Orchestra. And the many churches within Greater Boston not only afford the opportunity of hearing distinguished preachers but through their student clubs and young people's societies make possible for students a fine type of social and intellectual life.

### *University Buildings*

#### *Location*

Northeastern University, except for the Law School, is housed in three buildings located on Huntington Avenue, Boston, just beyond Massachusetts Avenue and opposite the historic Boston Opera House. The main administrative offices of the University are located in Richards Hall, a four-story brick structure added to the physical plant of Northeastern in 1938.

The chief railroad centers of Boston are the North and South Stations. To reach the University from the North Station, board a car going to Park Street, at which junction transfer to any Huntington Avenue car. To reach the University from the South Station, board a Cambridge subway train for Park Street Under. There go up one flight of stairs and board any Huntington Avenue car.

#### *East Building*

The East Building serves as headquarters for the Colleges of Liberal Arts and Business Administration. In addition, it houses the University Library, the Business Administration Laboratory, and several department offices. Jacob P. Bates Hall is also in this building. The latter is used for University band and orchestra rehearsals, glee club rehearsals, and entertainments, as well as dramatic club work.

### *South Building*

The South Building, located directly behind the East Building, houses the following laboratories: Biology, Industrial Engineering, Chemical Engineering, Hydraulics and Sanitary Engineering, and Electrical Measurements and Dynamo Laboratories. In addition, it provides space for department offices, classrooms, conference rooms and one large drafting room.

### *Richards Hall*

Richards Hall is the first unit of the new Northeastern plant. Its 100,000 square feet of floor area provide ample space for administrative offices, the bookstore, Student Union reading and game rooms, Chapel, and many other facilities.

The major portion of the building is given over to laboratories and classroom areas. Laboratory space is provided for the following: Mechanical Engineering, General and Advanced Physics, Inorganic, Organic, Analytical, and Physical Chemistry, together with several special research laboratories.

Outstanding among the classroom areas are a large chemistry lecture hall and two large classrooms seating 300 and 200 students respectively. On the fourth floor are located three large, light and well-equipped drawing rooms, together with an art room for carrying on designing and drafting which form so important a part of technical work. The penthouse contains a radio laboratory, astronomy laboratory, and a lounge for faculty and alumni.

### *Law School Building*

The building housing the Law School at 47 Mt. Vernon Street is a three-story structure completely equipped with administrative offices, faculty offices, classrooms, library and student recreational rooms. The interior of this building is both commodious and new, the entire structure having been recently remodeled by the University.

### *Laboratories*

The laboratories of the University fall into three categories. The first group includes those for experimental work in the pure sciences of biology, chemistry, and physics. The second includes those for the study of engineering in its major branches (civil, mechanical, electrical, chemical, and industrial). The third comprises the business and statistical laboratory.

In addition to these laboratory facilities which are described in the following pages, motion pictures and lantern slides are frequently used to supplement classroom instruction. For this purpose, there are available motion picture projectors for both sound and silent film as well as several lantern slide projectors.



### *Biology*

The Biological Laboratory is located on the second floor of the South Building, and is well equipped with simple, compound, and binocular dissecting microscopes for work in botany and zoology. In addition, the laboratory possesses unusually good zoological, botanical, parasitological and histological collections.

### *Chemistry*

The Chemical Laboratories located on the fourth floor of Richards Hall were given to the University by the Charles Hayden Foundation. They are splendidly equipped for work in general and inorganic chemistry, qualitative and quantitative analysis, and organic and physical chemistry. In addition several service rooms and space for a limited amount of research are provided.

#### *General Chemistry and Qualitative Analysis*

This laboratory is fully equipped with water, gas, electricity, steam, and fume hoods. A hydrogen-sulphide room, a balance room, and a conference room are also a part of this unit.

#### *Organic Chemistry*

This laboratory provides about six feet of working space for each student. The facilities are similar to those in the general chemistry laboratory, and in addition, there is provided a large evaporating unit and an organic combustion furnace.

#### *Quantitative Analysis and Physical Chemistry*

The tables and fume hoods and other equipment in this room are similar to those in the Organic Laboratory. In addition, a large drying oven, special balances, electrical instruments, temperature measuring devices, and other specialized apparatus are provided.

A small laboratory for technical analysis of such materials as coal, vegetable oils, petroleum, textiles, and rubber adjoins the main laboratory, and a special laboratory is also available for electrolytic work.

#### *Research*

Three small laboratories are equipped for advanced research. These are available for graduate thesis investigations.

### *Physics*

The Physics Laboratories located on the second floor of Richards Hall are fully equipped for elementary and advanced study as well as research. In addition an astronomy laboratory and a radio laboratory are located in the penthouse on the West Building.

*General*

This laboratory, designed for elementary instruction, is provided with gas, water, and electricity. A balance room, a spectrometer room, a photographic room, and a photometer room are directly connected with this laboratory. Sufficient apparatus is available so that ordinarily students may work alone on most experiments.

*Advanced*

This laboratory is designed with a view to both precision and flexibility. A special switchboard provides single phase and polyphase alternating current and a variety of direct current potentials. A workshop with lathe, drill press, grinder, and other tools as well as two separate research rooms complement the laboratory. A large number of special instruments plus considerable auxiliary apparatus gives a well rounded supply of equipment for advanced study and research.

*Astronomy and Radio*

The astronomy laboratory is provided with equipment for grinding mirrors and constructing telescopes, and a platform on the roof provides a very good unobstructed view for making observations.

The radio laboratory is a completely shielded room and houses the amateur transmitting station which operates on both radio-telephone and radiotelegraph. Facilities are also available for research.

## *Civil Engineering*

Most of the laboratory work in civil engineering is, of course, actual field work in surveying. A considerable amount of demonstration equipment and models are available for use in the study of structures, hydraulics, and sanitary engineering.

*Field Work*

The Department of Civil Engineering is provided with a variety of excellent equipment for field work. The instruments have been chosen to make possible the working out of advanced as well as elementary field problems, and to acquaint the students with the principal makes and types of instruments in general use.

*Hydraulics and Sanitary Engineering*

This laboratory located on the first floor of the South Building is equipped with demonstration measuring devices for use in connection with the courses in hydraulics.

Complete equipment is also provided for water and sewage analysis, and research students can be accommodated in this field.

### *Mechanical Engineering*

The Mechanical Engineering Department has a suite of well equipped laboratories containing a large variety of modern machines and occupying over 10,000 square feet of floor space in the basement of Richards Hall. Special areas have been set aside and equipped for oil testing, concrete mixing, mechanics research, and similar purposes. Auxiliary equipment is, of course, available for making all the usual tests and measurements.

#### *Steam Power*

This equipment includes a wide variety of steam engines, turbines, pumps, heat exchangers, and measuring instruments.

The auxiliary steam power plant operated by the University and the Boston Y.M.C.A. is also used for testing purposes. This plant consists of four horizontal return tubular boilers, two burning coal and two burning fuel oil. These feed three reciprocating steam engines and one turbine which in turn drive four direct current generators.

#### *Internal Combustion and Aeronautics*

The internal combustion equipment includes a number of gas and oil, automobile, airplane, and Diesel engines. Most of these are set up for running experimental tests, but several are available for dismantling and demonstration purposes.

In addition to the study of airplane engines, the laboratory is equipped with a small wind tunnel for experimental work in aerodynamics.

#### *Refrigeration, Heating, and Air Conditioning*

Included under this heading are an ammonia refrigerating machine, a constant temperature room equipped for either heating or cooling, and a large air conditioner unit.

#### *Testing Materials and Heat Treatment*

For tension, compression, bending, and shearing tests, the laboratory is equipped with a 300,000 lb. capacity Riehle and a 50,000 lb. capacity Olsen, as well as several smaller testing machines. For other tests the laboratory has cement testers, torsional testing machines, impact testers, fatigue testers, hardness testers, extensometers, oil testing equipment calorimeters, as well as instruments for measuring speed, vibration, temperatures, pressures and flow of fluids.

For heat treatment studies an electric furnace and a gas fired furnace are available. Equipment magnifying up to 2600 diameters is available for photographing crystalline structures, and the laboratory has polaroid equipment for photoelastic stress analysis.



### *Machine Shop*

Adjoining the laboratory is a machine shop fully equipped with machine tools, welding equipment, and a small forge.

### *Electrical Engineering*

The basement of the South Building is occupied by the electrical laboratories. These cover an area of approximately 7,800 square feet and include the dynamo, measurements, and high tension laboratories.

#### *Dynamo*

This laboratory is provided with both 60 cycle 3 phase 230 volt alternating current and 115-230 volt three-wire direct current. The equipment includes more than sixty motors and generators of different types together with the necessary auxiliary equipment to operate and test them. The motors and generators have been selected so as to reduce as much as possible the risk from high voltage while making available to the students a representative range of commercial apparatus.

#### *Electrical Measurements*

The equipment here is of two distinct types: first, that planned primarily for teaching principles of measurement, and secondly, that which is used in teaching advanced standardizing methods as well as for calibrating instruments in other laboratories of the University. Briefly, this laboratory is equipped for practically any work in electrical measurements except for the absolute determinations carried on in national standardizing laboratories.

#### *High Tension*

This laboratory is equipped with the necessary transformers and auxiliary equipment to provide 4 Kva. at 50,000 volts potential. A special room has been equipped for cable and insulation testing, and impulse testing of insulation is made possible by a surge generator capable of producing waves having crest values up to 100,000 volts. A 4,000 ampere low voltage transformer is also available for the study of the effects of heavy currents in conductors, switches, and contacts.

### *Chemical Engineering*

The Chemical Engineering Department has under its supervision the Chemical Engineering Laboratory and the Industrial Chemical Laboratory. These occupy at the present time approximately 1600 square feet of space on the second floor of the South Building.

#### *Chemical Engineering*

This laboratory is primarily devoted to the study of the various unit operations. These include flow of fluids, heat transfer, dis-

tillation, evaporation, absorption, drying, filtration, separation, crushing, and grinding. The equipment, therefore, includes flow meters, condensers, heat exchangers, distillation columns, vacuum dryer, air conditioning cabinet, filter press, screens, centrifuge, crusher, ball mill, and sieve shaker, as well as general equipment such as tanks, blowers, mixers, and scales.

#### *Industrial Chemistry*

This laboratory is used mostly for process development work and is equipped with high pressure steam, compressed air, vacuum, and other facilities usually found in a chemical laboratory. Other equipment includes a colloid mill, electric oven, high temperature gas oven, and a hydraulic press.

#### *Industrial Engineering*

Students in the Department of Industrial Engineering share in the use of the Mechanical Engineering Laboratories and the Business Laboratory. The Industrial Engineering Laboratory itself is located on the first floor of the South Building and is devoted exclusively to methods engineering (motion and time study work).

#### *Methods Engineering*

This laboratory is completely equipped with the latest facilities and tools used by methods engineers. Besides the general equipment consisting of benches, tables, lathe, jigs, fixtures, and racks, the laboratory has an ample supply of time study boards, stop watches and timers for time study work. There is also available complete motion picture equipment and microchronometers for micromotion work.

#### *Business Administration*

Students in Industrial Administration share in the use of the Industrial Engineering Laboratory which is devoted to Motion and Time Study work. In addition, all students in the College of Business Administration have access to the Business Laboratory located on the third floor of the East Building.

#### *Business Laboratory*

All of the commonly used office machines are available for laboratory work in accounting and statistics. These are available in a special room together with necessary library services, including Moody's Manuals, Poor's Manuals, and various charts and maps. The laboratory is in charge of a graduate assistant whose work is to maintain the machines in excellent condition and to give instruction in their uses. Principal pieces of equipment include duplicators, typewriters, hand and electric calculators, and hand and electric adding machines.



## *Design and Drafting Rooms*

The University possesses large, light, and well-equipped drawing rooms for the carrying on of the designing and drafting which form so important a part of engineering work. These rooms are supplied with lockers containing the drawing supplies, files containing blue prints, and photographs of machines and structures that represent the best practice. Drafting room blackboards are equipped with traveling straight edge devices which facilitate speed and accuracy in blackboard demonstrations.

## *Libraries*

The new library is located on the first floor of the East Building. The reading room seats 244 students at one time, and the stack capacity approximates 25,000 volumes. Here are available all of the general reference books, most of the professional and scientific volumes, and most of the periodicals to which the University subscribes.

Library hours are as follows:

8:45 A.M. to 10:00 P.M. Mondays through Fridays

8:45 A.M. to 1:00 P.M. Saturdays

Closed on Sundays and Holidays

The library is under the direction of a librarian and three assistants all of whom have had special training for the work.

A general reading room and library is maintained by the Northeastern Student Union in Room 356, Richards Hall. The books located here are chiefly non-technical works dealing with contemporary affairs, religious problems, international relations, travel, etc., among which students may browse during periods of relaxation. A few of the literary and religious periodicals are also available in this room.

## *Boston Public Library*

All members of the University, whether resident or non-resident students, have the privilege of taking books from the Boston Public Library and of using the library for general reference and study. Inasmuch as this is one of the best in the country, it presents unusual opportunities to the students. Within a few minutes' walk from the University, it enables students to have unlimited reference at any time to books and periodicals bearing upon their studies.

### *Lecture Assembly Halls*

Through special arrangement, Jordan Hall, Symphony Hall, and the Boston Opera House are made available for assembly purposes. These halls provide ample space for student activity assemblies and for special lectures by noted men. All the students in college at any period assemble for one hour each week throughout the college year. More than half of the assembly sessions are devoted to interests and activities developed by the students themselves. The other assembly periods are devoted to special lectures, sometimes under the direction of the student body and sometimes under the direction of the faculty. The special lectures are devoted to those elements of life which count most in the development of a man's viewpoint and his character.

### *Equipment for Physical Training*

Northeastern has exceptional facilities for all-round physical training. The gymnasium is one of the most complete in New England. Adjoining Richards Hall is a large field equipped for athletics. Here are two tennis courts, an outdoor gymnasium, a rifle range, a baseball cage, jumping pits, and a track with a 100-yard straightaway.

### *Natatorium and Gymnasium*

The Natatorium of the University is located in the East Building between the assembly hall and gymnasium. It is 75 feet long and 25 feet wide and is generally regarded as the finest of its kind in this area.

The Gymnasium is known as the Samuel Johnson Memorial Gymnasium and provides the following facilities: three gymnasiums, a twelve-lap running track, two large exercise rooms, boxing and wrestling rooms, handball and squash courts, bowling alleys, showers, steam baths, massage rooms, electric cabinet baths, and locker rooms.

### *Huntington Field*

Huntington Field, the University athletic field, is located on Kent Street in Brookline and provides ample facilities for track, baseball, football and other outdoor sports. The University maintains bus service between its Huntington Avenue plant and the Huntington Field making it possible for students to get back and forth with a minimum loss of time. The field is equipped with a new and commodious field house as well as ten sections of stadium seats for spectators.

## *Student Activities*

NORTHEASTERN University regards student activities as an integral part of its educational program. One of the main departments of the University is charged with the responsibility of co-ordinating the various types of activities and of administering the social, musical, literary, and athletic organizations in such a way as to enable each to contribute in a wholesome, worth while manner to student life at Northeastern. Every student is encouraged to participate in such activities as may appeal to him, although a standard of scholarship which is incompatible with excessive devotion to such pursuits is required of all students.

Members of the faculty also are interested in the informal aspects of the college program. Teaching loads are kept sufficiently low so that the instructional staff may have ample opportunity to mingle with students outside of the classroom in social activities and on the athletic field. In fact, some member of the faculty is appointed to serve as adviser for each student activity. His function is not to dictate how the organization shall be run, but to encourage the students in their extra-curricula endeavors and to give them the benefit of his mature point of view in solving the problems that inevitably arise.

One of the outstanding contributions of the co-operative plan in the field of higher education has been its capacity to develop in students those powers of social understanding that are so essential to success in professional life. At Northeastern the program of student activities is made to contribute to this end in a very real way. It is a conscious aim of the student activities advisers to develop among their advisees those qualities of personality and character which will enhance their usefulness as future professional men and citizens. Students have splendid opportunities to develop administrative and executive ability as leaders of undergraduate organizations. No academic credit is awarded for any student activity. This has been no deterrent, however, to student participation in extra-curricula activities, for a recent survey of the undergraduate body showed that over 90% of the enrollment were engaged in one or more forms of student activity.

### *Student Council*

Student government of the Day Colleges at Northeastern University is vested in the Student Council, composed of elected representatives from the various classes. The Council is the authority on all matters relating to student policies not definitely connected with classroom procedure. It has jurisdiction, subject



to faculty approval, over all such matters as customs, privileges, and campus regulations. The Dean of Students serves as faculty adviser to the Student Council.

### *Northeastern Student Union*

The purpose of the Northeastern Student Union is to carry out the work of a Christian association within the University. It endeavors to deepen the spiritual lives of Northeastern men through the building of Christian character, to create and promote a strong and effective Northeastern University spirit in and through a unified student body, to promote sociability, and to emphasize certain ethical, social, civic, intellectual, economic, physical, vocational, and avocational values.

All students are encouraged to participate in the activities of the Union, no matter what their religious faith, as the work of the Union is entirely non-sectarian. A good moral character is the only requirement for eligibility to membership. It is hoped that as many students as can will participate in this ideal extra-curricula work.

The Union conducts a weekly Chapel Service in the little chapel in Richards Hall, to which all faculty members and students are invited. The service, which is non-sectarian and voluntary, is held on Thursday mornings from 8:40 to 8:55 o'clock. Many eminent preachers of Greater Boston are engaged to deliver brief addresses.

### *Athletic Association*

All students in the Day Colleges are members of the Northeastern University Athletic Association. Policies of the association are passed upon by a Faculty Committee on Student Activities. This committee decides what students are eligible to participate in athletics, what the various sports schedules shall be, and what students may be excused from classes to represent the University on athletic trips.

The actual administration of the athletic program is in the hands of a second committee, known as the General Athletic Committee, which consists of the Director of Student Activities, the captains and managers of all varsity teams, and the coaches as ex officio members.

The University maintains both varsity and freshman teams in baseball, basketball, cross-country, football, hockey, and track. Intercollegiate games and meets are arranged with the leading colleges in the East. In addition to intercollegiate athletics the athletic association conducts an intramural program in various sports.



### *Publications*

#### *"The News"*

A college newspaper, the *Northeastern News*, is published each week throughout the college year by a staff selected from the student body. The copy is prepared, edited, and published by the students themselves with the counsel of a faculty adviser. Opportunity is afforded for the students to express their opinions on subjects relating to study, co-operative work, social events, or topics of the day. Positions on the *News* staff and promotions are attained by competitive work. The paper is in part supported by advertising, both national and local, and in part by a portion of the student activities fee. The *Northeastern News* is a member of the Eastern Intercollegiate Newspaper Association, and sends one of its editors to the annual convention of this association each year. Copies of the *News* are mailed to upperclassmen when they are at co-operative work and to freshmen after the close of their college year.

#### *"The Cauldron"*

The combined senior class publishes annually a college year book, *The Cauldron*. It is ready for distribution in the latter part of the second semester and contains a complete review of the college year with class histories, pictures of all seniors, of the faculty, and of undergraduate groups, as well as a miscellany of snapshots and drawings contributed by students.

### *Honor Societies*

Three honorary societies are chartered by the University in its Day Colleges:

The Senate, in the College of Engineering.

The Sigma Society, in the College of Business Administration.

The Academy, in the College of Liberal Arts.

Election to the college honorary societies is founded primarily upon scholarship, but before a man is privileged to wear the honorary society insignia he must give evidence of an integrity of character and an interest in the extra-curricula life of the University as well as an acceptable personality. The Societies have memberships consisting of the outstanding men in the Day Colleges. Election to the honorary society is the highest honor that can be conferred upon an undergraduate.

### *Professional Societies and Clubs*

To assist in the promotion of social, cultural, and intellectual advancement through informal channels, a number of professional societies and clubs are sponsored.

### *National Engineering Societies*

Students in the several professional curricula of the College of Engineering operate Northeastern University Sections of the appropriate national engineering societies. Chief among these are the following:

- American Society of Civil Engineers
- Boston Society of Civil Engineers
- American Society of Mechanical Engineers
- American Institute of Electrical Engineers
- American Institute of Chemical Engineers
- Society for the Advancement of Management

Members of the engineering faculty who hold membership in the parent organizations serve as advisers to these student groups. Meetings are held regularly, usually at night so that students from both divisions may attend, and practicing engineers are invited to address the sections. Occasionally appropriate motion pictures are shown, or the group visits some current engineering project in the vicinity of Boston. The College of Engineering encourages these student sections of the technical societies in the belief that they provide a wholesome medium for social intercourse as well as a worth while introduction to professional life.

Membership in the student sections of the American Society of Civil Engineers and Boston Society of Civil Engineers, the American Society of Mechanical Engineers, or the American Institute of Electrical Engineers also includes membership and privileges of the Engineering Societies of New England. This organization is an affiliation of all the major technical societies of Boston and vicinity and provides valuable lectures, smokers, and informal meetings with the outstanding men engaged in engineering work in Boston and vicinity.

### *Astronomy Club*

Membership in the Astronomy Club is open to all students in the College of Engineering who maintain satisfactory scholastic standing. The club has access to machine shops for the construction of telescopes and other instruments. It also has quarters in the penthouse on the fifth floor of Richards Hall. Meetings are held twice a month for the purpose of making astronomical observations and carrying on appropriate discussions.

### *Banking and Finance Club*

The purpose of this organization is to increase among its members the knowledge of the theory and practice of banking. Any student of Northeastern University, while enrolled in any of the banking courses of the College of Business Administration, is eligible to active membership in this club. Meetings are held each

ten week period at which banking executives from Greater Boston are invited to discuss current issues in the field.

#### *Camera Club*

The Camera Club welcomes all men interested in photography. Weekly discussions and special evening lectures by guest artists are part of the yearly program. Field trips, monthly photo contests and a general exhibition add to the interest and progressive work of this organization.

#### *Chess Club*

The Chess Club gives both beginners and experts an opportunity to enjoy the game. Yearly tournaments are held among the members and, in past years, the best men have engaged in inter-collegiate competition.

#### *Combined Musical and Dramatic Clubs*

The Department of Student Activities sponsors the following musical clubs: a concert orchestra, a band, a glee club, a banjo club, and a dance orchestra, for which all students with musical ability are eligible. Membership in the various musical clubs is attained by competitive effort.

Each organization has a faculty adviser and each elects a representative to the Musical Clubs Council. The purpose of this council is to co-ordinate the various musical activities of the Day Colleges. At the annual Musical Clubs Banquet, held early in the spring, charms are awarded to the leaders and managers of the several clubs and to members who have played over a period of three full years.

The various musical clubs, in conjunction with the Dramatic Club, combine in an annual mid-winter entertainment and participate in occasional outside public engagements throughout the college year.

Students interested in dramatics have an opportunity to cultivate this art under faculty coaches who co-operate with the Dramatic Club in the production of several pieces in the course of each college year. Frequently the Northeastern Dramatic and Glee Clubs collaborate with those of Simmons College in light operas such as those of Gilbert and Sullivan.

#### *Debating Society*

The purpose of the Debating Society, formed in 1936, is "to foster and promote an interest and facility in formal argumentation; to develop an impartial, unbiased, and intellectual consideration of questions and issues of current interest; and to sponsor intercollegiate relationships and competition in the debating field." Membership is open to all students of the Day Colleges.



### *German Language Club*

Students are given an opportunity in this club to use their knowledge of German in ways that give them entertainment as well as a greater appreciation of foreign customs and literature.

### *International Relations Club*

The International Relations Club was founded in 1932 for the purpose of studying and discussing those current national and international events and issues which vitally concern our American life and institutions.

It is the intention of the club to deal with all questions in an impartial and broadminded manner, and to take an intelligent and effective part in promoting international understanding and harmony. The club maintains contacts with similar organizations in other colleges.

Membership is not open to freshmen, and only to those upperclassmen who maintain good scholarship.

### *Law and Accounting Club*

All students interested in accounting and law are invited to join this stimulating club. Problems and cases involving the interrelations of accounting and law are presented and discussed at club meetings. Although upperclassmen usually present problems arising out of thesis or co-operative work, speakers from the professional world come to the meetings to present papers and lead the student discussion.

### *Mathematics Society*

The Mathematics Society encourages the study of topics of mathematical interest which are either outside or beyond the scope of the regular mathematics courses. Membership is restricted to those men who have completed one and one-half years of study in mathematics and have an average grade of not less than "C" in mathematics courses up through differential calculus. The club meets once every five weeks in the evening. Although membership is limited to upperclassmen, any student is always welcome to any meeting, and freshmen especially interested in mathematics are always welcome.

The final program of the year is devoted to a dinner meeting for which some prominent outside speaker is procured.

### *N. U. Chemical Society*

This organization of chemists (as distinguished from chemical engineers) was formed to meet the growing need among those students majoring in chemistry for a professional society of their own. The meetings are devoted to a discussion of problems in the field of pure chemistry.



*Radio Club*

One of the most popular undergraduate activities is the Radio Club. Members are provided opportunity for code practice and are encouraged to obtain their amateur licenses. The Club owns and operates station W1KBN, a short wave transmitter, located in the Radio Laboratory in the penthouse of Richards Hall. Meetings are held about once a month for the discussion of technical matters. Practicing radio engineers are frequently invited to address the Club at evening meetings, when students in both divisions may attend.

*Rifle Club*

Organized a number of years ago, the Rifle Club was so successful that in 1933 riflery was recognized as a minor sport. Members of the club are given instruction in the art of rifle shooting. Those students who excel in intra-mural competition are selected for the team representing the University in intercollegiate contests. Practice sessions are held twice a week in the University rifle range. Membership is open to all students.

*Yacht Club*

Only recently formed, the Yacht Club has taken steps to enter the Intercollegiate Yacht Racing Association, and a drive is under way to procure boats for the use of the members.

*Class Organization and Activity*

Each of the classes in the Day Colleges elects its officers and carries on activities as a class. Dances are sponsored by the classes at regular periods throughout the year. One of the high lights of the social program is the Junior Promenade, held each spring at one of the Boston hotels.

Seniors plan a whole week of activities just prior to Commencement in June.

Freshmen are required to wear the red and black cap distributed through the Department of Student Activities in order that they may be readily distinguishable to each other and to upperclassmen.

*Convocations*

The hour from 12:00 to 1:00 on Wednesdays throughout the year is set aside for convocations. Attendance is compulsory. Arrangements are made to bring before the student body some of the ablest and foremost thinkers of the day. A list of speakers

for the year will be found on page 15 of this catalogue. When the convocation hour is not occupied by a University lecturer, class meetings, concerts, or athletic rallies are held instead. Such gatherings are under the direction of the Department of Student Activities.

### *Fraternities*

There are at present ten local Greek letter fraternities chartered by Northeastern University. Each fraternity is provided with a faculty adviser who is responsible for the proper administration of the fraternity house under the rules and regulations established by the faculty. The list of fraternities in the order of their establishment is as follows:

- |                       |                     |
|-----------------------|---------------------|
| 1. Alpha Kappa Sigma  | 6. Phi Beta Alpha   |
| 2. Beta Gamma Epsilon | 7. Phi Gamma Pi     |
| 3. Eta Tau Nu         | 8. Sigma Phi Alpha  |
| 4. Nu Epsilon Zeta    | 9. Kappa Zeta Phi   |
| 5. Sigma Kappa Psi    | 10. Gamma Phi Kappa |

Elected representatives from each fraternity make up an Inter-Fraternity Council, a body which has preliminary jurisdiction over fraternity regulations. Its rulings are subject to the approval of the Faculty Committee on Student Activities.

## *The Alumni Association*

The alumni of the Day Colleges are organized to promote the welfare of Northeastern University, to establish a mutually beneficial relationship between the University and its alumni, and to perpetuate the spirit of fellowship among members of the Alumni Association.

The work of the General Alumni Association is supplemented by the activities of regional alumni clubs located throughout the east and middle west. The local clubs meet periodically in their respective centers to discuss matters pertaining to the University and its alumni. Meetings are also held in conjunction with the visits of Northeastern's athletic teams to the various club centers.

### *Officers of the Alumni Association*

#### *President*

GEORGE A. MALLION '20

#### *Secretary*

RONALD C. DAVIS '40

#### *Vice President*

JAMES W. DANIELS '25

#### *Treasurer*

WILLIS P. BURBANK '31

#### *Executive Committee*

SIDNEY A. STANDING '32

KENDALL BLANCHARD '29

JAMES W. DANIELS '25

GEORGE DAVENPORT '28

EARL H. THOMSON '25

HAROLD L. BURTON '29

#### *Alumni Executive Secretary*

RUDOLF O. OBERG '26

#### *Alumni Faculty Representative*

G. HARRY MESERVE '25

### *Alumni Council Representatives*

1913-1920—

LAWRENCE F. BLACKWELL

BERNARD H. CAPEN

PERRY F. ZWISLER

1921—ROGER E. SPEAR

1922—RAYMOND J. BRADBURY

1923—EDWARD J. PERRY

1924—H. RAYMOND BENSON

1925—RENE G. MAURETTE

1926—HERBERT A. WILSON

1927—WILLIAM J. URQUHART

1928—EARL R. GRANT

1929—JAMES H. KINGHORN

1930—

ALEXANDER G. MACGREGOR

1931—JOHN E. VADALA

1932—RAYMOND W. JAMES

1934—JAMES P. SCOBIE

1935—EDWARD V. KIRKLAND

1936—E. STANLEY NOWERS

1937—WARREN L. GANONG

1938—HAROLD R. BONNYMAN

1939—WILLIAM E. FEIDT

1940—WALLACE E. MCQUARRIE

1941—

## THE COLLEGE OF LIBERAL ARTS

### *Aims*

IN providing the means to a liberal education the College of Liberal Arts of Northeastern University has a three-fold objective: first, the development of intellectual capability; second, the development of a well-rounded personality; and third, preparation for a vocation.

While a liberal arts education must provide a knowledge of the development of the human race and of human experience down through the ages as well as familiarity with the world in which we live, the mere accumulation of a mass of factual information is not adequate. A truly liberal education must develop intellectual capability, the acquisition of definite intellectual interests, and the attainment of rational attitudes and points of view. A liberal education should develop an open mind, free from bias and prejudice; an eagerness for truth; a critical skepticism which insists upon the examination of the basis for every belief and the testing of every proposal before giving it adherence; the ability to analyze the several elements of a problem, to perceive its implications, and to obtain a clear perspective of the entire situation; a deep respect for human institutions and conventions based upon an understanding of the processes of social development but with a willingness to consider judicially suggested improvements.

In providing for the development of a well-rounded personality the College of Liberal Arts endeavors to aid each student in the unfolding of those personality traits and the attaining of that emotional balance which will make him not only individually efficient but also a desirable citizen, qualified in every respect to accept his social responsibilities.

The College of Liberal Arts holds that there is no inconsistency between liberal education and preparation for a vocation, since liberal arts colleges were originally established with the purpose of training for certain professions. Today it is widely accepted that a liberal education must prepare both for the art of living and for the obtaining of a living. The College of Liberal Arts aims at providing an academic program coupled with co-operative work experience which will furnish students with a sound training either for further graduate study or for immediate entrance upon graduation into some vocation.



## *Methods*

SO that each student may plan a college program to suit his own interests and aptitudes, a wide range of electives is offered. This does not mean that students are free to elect courses indiscriminately, for if he is to obtain a liberal education he must have training in several basic fields. Therefore, a definite series of basic courses in each curriculum is required by the faculty. These required courses are largely concentrated in the first two years of the curriculum.

Through a comprehensive guidance program each student is directed in his selection of courses so that he obtains the proper preparation for his intended vocation. Specialization in his major field is emphasized during the latter part of the curriculum and is facilitated by the opportunity for electing certain courses in the College of Engineering and the College of Business Administration.

Through the Northeastern plan of co-operative education for upperclassmen, the student makes early contact with actual working conditions and profits by the wholesome experience of earning at least part of the money to defray his own college expenses. Viewed as a whole, then, his college years surround him not with an artificial atmosphere of cloistered scholarship but with an environment very close to that which he will enter after graduation, and thus tend to make him readily employable, an essential element of vocational competence.

## *Evening Courses*

In order to provide employed men and women with opportunities in liberal arts education a number of the regular courses are offered during the evening. These courses are designed for three groups of young men and women who are secondary school graduates and qualified for entrance to the college: (1) those who wish to prepare for admission to the School of Law, (2) those who wish to pursue a cultural program leading to the title of Associate in Arts, (3) those who do not wish to follow a specific program but desire to take courses to improve their cultural background.

The evening courses are arranged in three-year programs permitting concentration in economics, English, history and the social sciences, and a pre-legal program. Each of these evening programs meets one-half the semester hour requirement for the A.B. or S.B. degree and leads to the title of Associate in Arts.

## *Preparation for a Career*

THE curricula in the College of Liberal Arts afford not only a broad cultural training but also the necessary foundation for a wide range of vocations. Some of the career opportunities open to the graduates of the College of Liberal Arts together with the academic programs needed are indicated below and in the pages which follow.

### *Business*

The value of a liberal arts preparation for a business career is clearly shown by the increasing demand for liberal arts graduates by the largest and most progressive corporations in the country. For their training programs in manufacturing, merchandising, or selling many companies are seeking adaptable young men with a liberal arts background.

Students planning either to go to a graduate school of business administration or to enter business directly upon graduation should major in economics and should elect courses in English, government and psychology. A limited number of specialized courses in the College of Business Administration such as advertising, contracts, industrial management, insurance, investments, real estate practice, and retail merchandising may be taken by students who have had the necessary pre-requisites.

### *Biological Sciences*

Industrial biological laboratories, hospital pathological laboratories, public health laboratories, and many governmental biological laboratories require technicians and research assistants who have majored in biology and have had some training in chemistry. Graduate study is practically essential for those who plan upon research in this field.

### *Chemistry*

Chemistry is rapidly approaching the status of a profession as shown by the recent action of the American Chemical Society in laying down specifications for undergraduate training in chemistry. Students who choose a chemistry major at Northeastern, a program based upon the above specifications, will be prepared upon graduation to become junior chemists in industrial, commercial, or governmental chemistry laboratories. The same program provides a thorough foundation for graduate study in chemistry.

### *Dentistry*

The minimum requirement for admission to dental schools is two years of preliminary study in an approved college. Since the requirements of individual dental schools vary, students should familiarize themselves with the specific requirements of the schools in which they are interested. For most dental schools a candidate for admission must offer at least six semester hours each in English, physics, and biology, and twelve semester hours in chemistry including organic chemistry.

Pre-dental students at Northeastern will be able to meet these requirements by choosing a biology major and electing organic chemistry in their second year program.

### *Government Service*

Government service is a very comprehensive term since the numerous activities of modern government require all types of trained workers. For more and more of these positions a college education is essential as shown by the fact that only college graduates are eligible to take many civil service examinations today. Recently the United States Civil Service Commission inaugurated examinations for graduating seniors for such positions as Junior Biologist, Junior Economist, Junior Statistician, Junior Examination Assistant (for majors in psychology), Junior Administrative Technician, etc.

The distinctive governmental career field is that of public administration since the need for college trained men in administrative governmental posts of all types, political or non-political, is being increasingly recognized. While graduate training is desirable, an undergraduate program with a major in economics and a minor in government will provide the necessary foundation for a career in government service at home or abroad.

### *Journalism*

Many of the nation's leading editors now advise students preparing for a career in journalism to obtain a broad liberal arts education rather than to concentrate on specific training in the routines of journalism in their undergraduate programs. It should be observed that opportunities in journalism today are not restricted to the urban or rural newspaper fields. Publishing houses, trade journals, house organs, advertising departments and agencies, and the various types of public relations work need college graduates with the same basic training.

Students who desire to enter journalism should choose the English-journalism major, an economics minor, and should elect courses in advertising in the College of Business Administration.



### *Law*

Effective September 1, 1938, by a ruling of the Supreme Judicial Court of Massachusetts, in order to be eligible for admission to the Bar an applicant must have completed certain general educational requirements before beginning his legal education. Briefly, this general education must comprise graduation from a four-year high school and the completion of not less than half of the work accepted for the Bachelor's degree in a college approved by the Board of Bar Examiners.

Two separate programs of pre-legal study, both of which meet one-half of the semester hour requirements for the Bachelor's degree, are offered by the College of Liberal Arts.

One of these programs is specifically adapted to the needs of full-time day students. It comprises one year of thirty-five weeks and a second year of thirty weeks. This program follows the second year requirements of the major in economics but permits the student to elect the courses in history, government, and English which are recommended for the prospective student of law.

The other pre-legal program is designed to meet the needs of employed men and women. It is provided by offering a number of the regular courses during the evening and requires three years for completion.

### *Library Work*

Professional training for library work now demands at least one year of graduate study in a library school following a broad undergraduate foundation in liberal arts. While a major in English is usually advised, many opportunities are available for men who have concentrated in other fields.

### *Medicine*

In order to be eligible for admission to a medical school according to the Committee on Education of the American Medical Association, a candidate must have attended an approved college and have included certain specific work in his program. The minimum course requirements are: six semester hours of English, eight semester hours of inorganic chemistry, four semester hours of organic chemistry, eight semester hours of physics, eight semester hours of biology, eight semester hours of foreign languages, and twelve semester hours of non-scientific subjects. Since some medical schools impose additional requirements, pre-medical students should obtain full information from the medical school of their choice about the courses which must be offered for admission.



Every subject which the best medical schools prescribe or recommend can be obtained by a student who chooses biology as his major field, chemistry as one minor field, and takes the proper elective courses.

### *Ministry*

Preparation for the ministry today requires a theological school training following graduation from a college of liberal arts. Specific undergraduate programs are not usually prescribed by theological schools, but courses in literature, philosophy, history, sociology, and economics are frequently recommended. Little or no undergraduate work in religion is advised in order that the broadest possible background be obtained for later concentration in that field. While a major in English or sociology is commonly suggested, students who look toward the ministry as a career should obtain counsel from the dean of the theological school which they plan to attend.

### *Physics*

As a result of the rapid developments in physics in recent years, there are increasing opportunities in applied physics on the technical staffs and in the research laboratories of the electrical, radio, optical, and other industries for the liberal arts graduate who has majored in physics. Graduate study is necessary for those who plan on research in pure physics.

### *Psychology*

Men who have majored in psychology are in demand for personnel work in industry, education, government, and in many types of social service work. Graduate study is essential for those who desire to become professional psychologists.

### *Social Service*

Men who have majored in sociology are prepared for numerous phases of work in the social service field, such as social case work, family welfare, child welfare, probation and parole, juvenile court, settlement work, and public relief administration. It should be noted that at least one year of advanced study in a graduate school of social work is becoming increasingly essential for those who desire full professional status.

### *Statistical Work*

The growing emphasis upon statistics in business, education, social service, and government has opened a new career field for the student who majors in mathematics and obtains preparation in statistics. Similar training is necessary for students who wish to enter the actuarial field.

### *Teaching (Secondary School)*

While a major in education is not offered in the College of Liberal Arts, a minor in this field is available which meets the recommended preparation of the Department of Education of the Commonwealth of Massachusetts for teachers in secondary schools. Students from other states should familiarize themselves with the requirements of their own state as these requirements are constantly being increased.

Most small secondary schools, in which the graduate must begin, expect teachers to be able to teach at least two, and often three, subjects. Consequently programs should provide for the common combinations of related subjects. A major should be selected from the following fields: biology, chemistry, English, mathematics, or physics.

Students who desire to become teacher-coaches should obtain a second minor in physical education.

### *Teaching (College)*

Students who plan to enter the college teaching profession will find that each of the major programs affords an excellent preparation for graduate study in the leading universities of the country. Since all graduate schools require a reading knowledge of French or German, frequently both, students should elect adequate work in these languages. Seminar courses and thesis work are strongly recommended for their training in research techniques.

### *Combined Liberal Arts and Law Curriculum*

This curriculum reduces by one year the time ordinarily required for obtaining the A.B. or S.B. and the LL.B. degrees. Students who have completed 105 semester hours of academic work of which at least 70 have been earned in the Northeastern University College of Liberal Arts, and who have fulfilled all other graduation requirements, will receive the A.B. or S.B. degree upon satisfactorily completing the full first year program in the School of Law. Students who enter the Evening Division of the School of Law will not receive the first degree until the end of the second year of their course.

## Admission Requirements

Applicants for admission to the freshman class without restrictions must qualify by *one* of the following methods:

1. Graduation from an approved course of study in an accredited secondary school, including prescribed subjects listed below.
2. Completion of fifteen acceptable secondary school units with a degree of proficiency satisfactory to the Department of Admissions.
3. Examinations.

(Certificate of entrance examinations passed for admission to recognized colleges and technical schools may be accepted.)

### Prescribed Subjects for Admission

College of Liberal Arts

The College of Liberal Arts offers courses leading either to the A.B. or to the S.B. degree. According to the degree which he expects to receive, the student will present for admission one or the other of the groups of prescribed subjects listed below.

<i>A.B. Curriculum</i>		<i>S.B. Curriculum</i>	
	Units		Units
English	3	English	3
Foreign Language (Ancient or Modern)	3	†Mathematics	2 or 3
Social Studies	2	Natural Science	1
*Electives	7	*Electives	8 or 9
	<hr/>		<hr/>
Total	15	Total	15

A unit is a credit given to an acceptable secondary school course which meets at least four times a week for periods of not less than forty minutes each throughout the school year.

Entrance examinations are not required of students whose transcripts of record are acceptable, but the Department of Admissions reserves the right to require a candidate to present himself for examination in any subjects that it may deem necessary because of some weakness in his secondary school record.

\*Not less than four of the "electives" must be in one or more of the following academic branches: Languages, Natural Science, Mathematics, Social Sciences, History.

†Students expecting to major in chemistry, mathematics, or physics must offer 3 units.



### *Other Requirements*

These formal requirements are necessary and desirable in that they tend to provide all entering students with a common ground upon which the first year of the college curriculum can be based. But academic credits alone are not an adequate indication of a student's ability to profit by a college education. Consequently the Department of Admissions takes into consideration, along with the formal requirements, many other factors regarding candidates for the freshman class. A student's interests and aptitudes in so far as they can be determined, his capacity for hard work, his attitude toward his classmates and teachers in high school, his physical stamina, and most important of all — his character, all these considerations are carefully weighed. In this way the University seeks to select for its student body those who not only meet the academic admission requirements but who also give promise of acquitting themselves creditably in the rigorous program of training afforded by the co-operative plan and of later becoming useful members of society.

### *Personal Interview*

Candidates for admission should communicate with the Director of Admissions, who will advise them frankly on the basis of past experience. A personal interview is always preferred to correspondence, and parents are urged to accompany their sons whenever this is possible. Effective guidance depends in large measure upon a complete knowledge of a candidate's background and problems. Parents invariably are able to contribute much information that aids the admissions officer in arriving at a decision. In general, a student is likely to be more successful in his college work if he does not enroll under the age of seventeen.

Candidates are urged to visit the office of Admissions for personal interview if it is possible for them to do so before submitting their applications. Office hours of the Department are from 9:00 A.M. to 4:00 P.M. daily; Saturdays to 12:00 M. The Director of Admissions will interview applicants on Wednesday evenings but by appointment only.

### *Application for Admission*

Each applicant for admission is required to fill out an application blank whereon he states his previous education, as well as the names of persons to whom reference may be made in regard to his character and previous training.

An application fee of five dollars (\$5.00) is required when the application is filed. This fee is non-returnable.



The last page of this catalogue is in the form of an application blank. It should be filled out in ink and forwarded with the required five dollar fee to Director of Admissions, Northeastern University, Boston, Mass. Checks should be made out to Northeastern University.

Upon receipt of the application, properly filled out, the College at once looks up the applicant's references and secondary school records. When replies have been received to the various inquiries, the applicant is informed as to his eligibility for admission.

Application should be filed not later than May first, thus allowing ample time for the investigation of the applicant's secondary school records before he enrolls in the College.

The University reserves the right to place any entering student upon a period of trial. Whether he shall be removed from trial at the end of this time or requested to withdraw will be determined by the character of the work he has accomplished and his conduct during this trial period.

### *Registration*

Eligibility for admission does not constitute registration. Freshmen register at the University on September 10, 1942. No student is considered to have met the requirements for admission until he has successfully passed the required physical examination.

### *Advanced Standing*

Students transferring from approved colleges will be admitted to advanced standing provided their records warrant it. Whenever a student enters with advanced standing and later proves to have had inadequate preparation in any of his pre-requisite subjects, the Faculty reserves the right to require the student to make up such deficiencies.

Applicants seeking advanced standing should arrange to have transcripts of their previous college records forwarded with their initial inquiry. Students admitted to advanced standing are not eligible for placement at co-operative work until they have completed a full year of academic work at the University.

### *Entrance Examinations*

Students who are deficient in required units for admission may remove these deficiencies by examination. Such examinations are held at the University unless special arrangements are made with the Department of Admissions to administer them elsewhere. Students are advised to take such examinations on the earliest

possible date in order that any deficiencies which they fail to clear may be made up in time to permit registration with the desired class and division.

The time of examinations is as follows:

10:00 A.M. to 12:00 M.

1:00 P.M. to 3:00 P.M.

During the current year examinations will be given on the following days: June 3, 1942; September 3, 1942. All other examinations will be given by special assignment.

### *Outline of Freshman Courses*

The first year is a period of full time study during which the student must demonstrate his fitness for the program which he has elected. Students who are unsuccessful in the basic courses of the freshman year will not be permitted to continue with their advanced program, but will be advised to change their goal and type of training. In some instances this will mean change to another curriculum at Northeastern; in others, transfer to another institution. *The freshman courses are so arranged as to permit change of objective at the end of the first year with a minimum loss of time.*

## Freshman Programs

1. For students majoring in Economics, English, English-Journalism, Psychology, Sociology, or taking the Pre-Legal program.

No.	Course	S.H.	No.	Course	S.H.
E 1-A	English I. . . . .	3	E 2-A	English I. . . . .	3
H 1	History of Civilization . .	4	H 2	History of Civilization . .	4
Gv 1	American Government .	3	Gv 2	American Government .	3
P 1-A	Survey of the Physical Sciences or . . . . .	4	P 2-A	Survey of the Physical Sciences or . . . . .	4
B 1	General Zoology . . . . .	3	B 2	General Botany . . . . .	3
F 3, G 1, or Sp 1	French, German, or Spanish . . . . .	3	F 4, G 2, or Sp 2	French, German, or Spanish . . . . .	3
PE 1	Hygiene . . . . .	1		Orientation . . . . .	0
	Physical Training . . . . .	0		Physical Training . . . . .	0
		17-18			16-17

2. For students majoring in Chemistry, Mathematics, and Physics.

No.	Course	S.H.	No.	Course	S.H.
E 1-A	English I. . . . .	3	E 2-A	English I. . . . .	3
M 1, M 3	Algebra, Trigonometry .	5	M 4	Analytic Geometry . . . .	5
P 1	Physics I. . . . .	3	P 2	Physics I. . . . .	3
Ch 1	General Chemistry . . . .	4	Ch 2	General Chemistry . . . .	4
F 3, G 1, or Sp 1	French, German, or Spanish . . . . .	3	F 4, G 2, or Sp 2	French, German, or Spanish . . . . .	3
PE 1	Hygiene . . . . .	1		Orientation . . . . .	0
	Physical Training . . . . .	0		Physical Training . . . . .	0
		19			18

3. For students majoring in Biology, or taking the Pre-Dental or Pre-Medical program.

No.	Course	S.H.	No.	Course	S.H.
E 1-A	English I. . . . .	3	E 2-A	English I. . . . .	3
M 1, M 3	Algebra, Trigonometry .	5	M 4	Analytic Geometry . . . .	5
B 1	General Zoology . . . . .	3	B 2	General Botany . . . . .	3
Ch 1	General Chemistry . . . .	4	Ch 2	General Chemistry . . . .	4
F 3, G 1, or Sp 1	French, German, or Spanish . . . . .	3	F 4, G 2, or Sp 2	French, German, or Spanish . . . . .	3
PE 1	Hygiene . . . . .	1		Orientation . . . . .	0
	Physical Training . . . . .	0		Physical Training . . . . .	0
		19			18

## *Requirements for Graduation*

The following requirements must be fulfilled by all candidates for the A.B. or S.B. degree:

1. A student must have completed a total of not less than 135 semester hours of academic work with a degree of proficiency acceptable to the faculty. (One semester hour comprises three clock hours of work per week over a period of from fifteen to eighteen weeks. Usually this represents one hour of recitation or lecture and two hours of outside preparation. In laboratory work, however, a larger part of the time is given to class work.) College attendance for 125 weeks is needed to fulfill this requirement. Normally this will require a period of five years although the work may be completed in four years by students who elect full-time study instead of the co-operative plan for one or more upperclass years. Students who undertake co-operative work assignments must also meet the requirements of the Department of Co-operative Work before they become eligible for their degrees.  
No student transferring from another college or university is eligible to receive the A.B. or the S.B. degree until he has completed at least one academic year at Northeastern immediately preceding his graduation.
2. At least 30 semester hours must be completed in a major field of concentration. Certain courses are required in each field of concentration.
3. From 12 to 16 semester hours must be completed in each of two other fields which are called the minor fields.
4. At least two full year courses in foreign language must have been completed in college. A year of elementary work in a foreign language will not be accepted for this requirement unless followed by a second year in the same language.

### *Graduation with Honor*

Candidates who have achieved distinctly superior attainment in their academic work will be graduated with honor. Upon special vote of the faculty a limited number of this group may be graduated with high honor or with highest honor. Students must have been in attendance at the University at least three years before they may become eligible for honors at graduation.



## Curricula Requirements

The following fields of study are approved as major fields in the College of Liberal Arts: biology, chemistry, economics, English, English-journalism, mathematics, physics, psychology, and sociology. Pre-dental, pre-legal and pre-medical students are referred to pages 61 and 62 for a statement concerning their upperclass programs. Required upperclass courses for students in each major field are listed below.

### Biology

COURSES IN BIOLOGY	B 1	General Zoology	B 2	General Botany
	B 3	Invertebrate Zoology	B 4	Invertebrate Zoology
	B 5	Vertebrate Zoology	B 6	Vertebrate Zoology
	B 7	Animal Physiology	B 8	Animal Physiology
	B 9	Genetics	B 10	Genetics
	B 11	Animal Histology	B 12	Animal Histology
	B 13	Vertebrate Embryology	B 14	Vertebrate Embryology
	B 17	Mammalian Anatomy	B 18	Mammalian Anatomy
COURSES IN OTHER FIELDS	six semester hours in French or German, eight semester hours in physics, six semester hours in English.			

### Chemistry

COURSES IN CHEMISTRY	Ch 9	Qualitative Analysis	Ch 12	Quantitative Analysis
	Ch 11	Qualitative Analysis Laboratory	Ch 14	Quantitative Analysis Laboratory
	Ch 13	Quantitative Analysis		
	Ch 17	Quantitative Analysis Laboratory		
	Ch 31	Organic Chemistry	Ch 32	Organic Chemistry
	Ch 33	Organic Chemistry Laboratory	Ch 34	Organic Chemistry Laboratory
	Ch 35	Organic Chemistry	Ch 40	Physical Chemistry
	Ch 39	Organic Chemistry Laboratory		
	Ch 45	Physical Chemistry	Ch 46	Physical Chemistry
	Ch 51	Sources of Information	Ch 48	Colloidal Chemistry
COURSES IN OTHER FIELDS	Ch 63	Advanced Chemistry	Ch 64	Advanced Chemistry
	six semester hours in French or German, six semester hours in mathematics, twelve semester hours in physics, and sixteen semester hours in non-scientific fields.			

### Economics

COURSES IN ECONOMICS	Ec 3	Economic Principles	Ec 4	Economic Principles
	Ec 5	Economic Problems	Ec 6	Economic Problems
	Ec 7	Money and Banking	Ec 8	Business Cycles
	Ec 11	Labor Problems	Ec 14	International Economic Relations
	Ec 15	History of Economic Thought	Ec 16	Advanced Economic Theory
	Ec 17	Statistics	Ec 18	Statistics
COURSES IN OTHER FIELDS	six elective semester hours in economics.			
	six semester hours in modern languages, six semester hours in English, twelve semester hours in the allied social sciences.			

*English*COURSES IN  
ENGLISH

- |   |                               |
|---|-------------------------------|
| E 5 Advanced Composition                      | E 6 Advanced Composition      |
| E 15 English Literature                       | E 16 English Literature       |
| E 17 Drama before Shakespeare                 | E 18 Chaucer                  |
| E 19 Shakespeare                              | E 20 Shakespeare              |
| E 23 Seventeenth and Eighteenth Century Prose | E 24 Nineteenth Century Prose |
| E 25 American Literature                      | E 26 American Literature      |
| E 29 Great European Writers                   | E 30 Great European Writers   |

COURSES IN  
OTHER FIELDS

six semester hours in modern languages, sixteen semester hours in the social sciences.

*English-Journalism*COURSES IN  
ENGLISH

- |   |                               |
|---|-------------------------------|
| E 9 Journalism I                              | E 10 Journalism I             |
| E 11 Journalism II                            | E 12 Journalism II            |
| E 15 English Literature                       | E 16 English Literature       |
| E 17 Drama before Shakespeare                 | E 18 Chaucer                  |
| E 23 Seventeenth and Eighteenth Century Prose | E 24 Nineteenth Century Prose |
| E 25 American Literature                      | E 26 American Literature      |
| E 29 Great European Writers                   | E 30 Great European Writers   |

COURSES IN  
OTHER FIELDS

six semester hours in modern languages and sixteen semester hours in the social sciences.

*Mathematics*COURSES IN  
MATHEMATICS

- |                              |                               |
|------------------------------|-------------------------------|
| M 5 Differential Calculus    | M 6 Integral Calculus         |
| M 7 Differential Equations I | M 8 Differential Equations II |
| M 15 Advanced Calculus       | M 16 Advanced Calculus        |
| M 17 Series                  | M 18 Theory of Equations      |

six elective semester hours in mathematics.

COURSES IN  
OTHER FIELDS

six semester hours in French or German, twelve semester hours in physics, and ten semester hours in non-scientific fields.

*Physics*COURSES IN  
PHYSICS

- |                        |                        |
|------------------------|------------------------|
| P 3 Physics II         | P 4 Physics II         |
| P 5 Physics Laboratory | P 6 Physics Laboratory |
| P 9 Optics             | P 10 Optics            |
| P 13 Acoustics         | P 14 Acoustics         |
| P 15 Modern Physics    | P 16 Modern Physics    |

six elective semester hours in physics.

COURSES IN  
OTHER FIELDS

six semester hours in French or German, twelve semester hours in mathematics, and ten semester hours in non-scientific fields.

## *Psychology*

COURSES IN PSYCHOLOGY	Ps 1	Introduction to Differential Psychology	Ps 2	General Psychology
	Ps 3	Experimental Psychology	Ps 4	Differential Psychology
	Ps 5	Educational Psychology	Ps 6	Educational Psychology
	Ps 7	Social Psychology of Every Day Life	Ps 8	Social Psychology, Theory and Methods
	Ps 9	Psychology of Personality	Ps 10	Abnormal Psychology
	Ps 11	Applied Psychology		
	six elective semester hours in psychology or sociology.			
COURSES IN OTHER FIELDS	six semester hours in French or German, six semester hours in English, twelve semester hours in allied social sciences.			

## *Sociology*

COURSES IN SOCIOLOGY	S 1	Introduction to Sociology	S 2	Principles of Sociology
	S 3	Social Problems	S 4	Social Pathology
	S 5	Criminology	S 6	Penology
	S 7	Principles of Social Ethics	S 8	Problems of Social Ethics
	S 9	The Family	S 10	The Family
	S 11	Social Control	S 12	Social Progress
	S 15	History of Sociological Thought		
	four elective semester hours in sociology or psychology.			
COURSES IN OTHER FIELDS	six semester hours in French or German, six semester hours in English, twelve semester hours in allied social sciences.			

## *Minor Fields*

Students may elect their minor fields after consultation with their faculty advisers. In addition to the major fields listed the following subjects are available as minors: education, French, German, government, history, philosophy, and physical education.

## Graduate Study

GRADUATE work in physics and in chemistry is offered to properly qualified students desiring to undertake advanced study leading to the degree of Master of Science. Candidates for admission to this program must be high ranking students who have completed, or will have completed prior to admission to the graduate program, the requirements for the Bachelor of Science degree with major in chemistry or physics at an institution of recognized standing. At the present time the program is limited to teaching fellows at Northeastern University.

### *Requirements for the Master of Science Degree*

Candidates for the degree of Master of Science must have completed satisfactorily 32 semester hours of study beyond that required for the Bachelor's degree. Of these, 20 semester hours (including thesis) must be graduate courses in the major field of chemistry or physics; the remaining 12 credits may be earned in a minor field.

The graduate courses are listed under the departments giving graduate work. The minor credits may be selected from graduate courses or from certain advanced undergraduate courses called "B" courses. (Graduate students must obtain a grade of B or better to receive credit for "B" courses.)

Candidates are also required to complete a satisfactory thesis as a partial requirement for the Master's degree. Theses must be completed in the field of major study and will be credited as eight semester hours toward the major requirement. Theses must be completed at least four weeks in advance of the date on which the degree is to be awarded.

Finally, candidates are required to pass satisfactorily a comprehensive examination which may be written or oral at the discretion of the department concerned.

### *List of "B" Courses*

The "B" courses are divided into two groups. The first group is comprised of subjects which may be elected to complete the requirements for minor credits. The second group includes subjects approved for graduate study only in limited amount.

The individual programs of study must have the approval of the Director of Graduate Study who also acts as registration officer for graduate students.



*B Courses Group I*

<i>No.</i>	<i>Course</i>	<i>Credits</i>
B 3	Invertebrate Zoology.....	2
B 4	Invertebrate Zoology.....	2
B 5	Vertebrate Zoology.....	2
B 6	Vertebrate Zoology.....	2
B 17	Mammalian Anatomy.....	2
B 18	Mammalian Anatomy.....	2
Ch 41	Physical Chemistry.....	3½
Ch 42	Physical Chemistry.....	3½
Ch 61	Thermodynamics.....	2
EL 21	Electrophysics.....	1
EL 22	Electrophysics.....	2
M 7	Differential Equations I.....	2½
M 8	Differential Equations II.....	3
M 15	Advanced Calculus.....	3
M 16	Advanced Calculus.....	3
M 17	Series.....	3
M 18	Theory of Equations.....	3
P 9	Optics.....	3
P 10	Optics.....	3

*B Courses Group II*

<i>No.</i>	<i>Course</i>	<i>Credits</i>
Ec 11	Labor Problems.....	3
Ec 14	International Economic Relations.....	3
Ec 15	History of Economic Thought.....	2
Ec 16	Advanced Economic Theory.....	2
Ed 1	History of Education.....	2
Ed 2	History of Education.....	2
Gv 3	Comparative Government.....	2
Gv 4	Comparative Government.....	2
Gv 7	Origin of Political Theory.....	2
Gv 8	Modern Political Theory.....	2
H 7	England to 1688.....	2
H 8	England since 1688.....	2
H 11	Latin American History.....	2
H 12	Latin American History.....	2
Ph 3	History of Philosophy.....	2
Ph 4	History of Philosophy.....	2
Ps 5	Educational Psychology.....	2
Ps 6	Educational Psychology.....	2
Ps 7	Social Psychology of Everyday Life.....	2
Ps 8	Social Psychology, Theory and Methods...	2
S 7	Principles of Social Ethics.....	2
S 8	Problems of Social Ethics.....	2

## *Synopses of Courses of Instruction*

On the pages which follow are given the synopses of courses offered in the several curricula of the College. Courses offered in the first semester bear odd numbers, and those offered in the second semester bear even numbers.

The term pre-requisite indicates a course that must be completed with a passing grade before a student will be permitted to register for the advanced course to which it applies. The term preparation indicates a course of such a preparatory nature that a student undertaking an advanced course without having had the preparation course specified, will ordinarily find himself greatly handicapped, and may not register in the advanced course without the consent of the instructor.

Freshman courses extend over a full semester of 18 weeks. Upperclass courses are uniformly 10 weeks in length each term. Unless otherwise noted all undergraduate courses meet for three class periods each week.

The University reserves the right to withdraw any course in which there is insufficient enrolment.

### *Biology*

#### *B 1-A General Biology*

An introductory course in biology dealing with animals and plants and their relations to their environment. The fundamental phenomena of living things are stressed. General biological laws and theories are discussed. The laboratory work illustrates the lectures.

*4 semester hour credits (4 cl., 3 lab.)*

#### *B 1 General Zoology*

An introductory course dealing with the basic principles of zoology. A survey of the main types of animals; their classification, structure, life history, distribution, and economic value. The laboratory work illustrates the lectures.

*3 semester hour credits (2 cl., 2 lab.)*

#### *B 2 General Botany*

An introductory course dealing with the basic principles of botany. A general survey of the more important plant types throughout the vegetable kingdom; their classification, structure, life history,

distribution, and economic value. The fundamentals of plant physiology are stressed. The laboratory work illustrates the lectures.

*3 semester hour credits (2 cl., 2 lab.)*

### *B 3 Invertebrate Zoology*

This course deals with the comparative development and structure of the organic systems of invertebrate animals as represented by the following phyla: Protozoa, Porifera, Coelenterata, Ctenophora, Platyhelminthes, Nemathelminthes, Trochelminthes, and Molluscoidea; and their biological and ecological relationships. The laboratory work consists of detailed dissection of representative types.

*Pre-requisite: B 1*

*2 semester hour credits (2 cl., 3 lab.)*

### *B 4 Invertebrate Zoology*

Continues and presupposes course B 3. In this part of the course, the lectures deal with the comparative development and structure of the various organ systems of invertebrate animals as represented by the following invertebrate phyla: Coelhelminthes, Mollusca, Arthropoda, and Echinodermata; and their biological and ecological relationships. The laboratory work consists of detailed dissection of representative types.

*Preparation: B 3*

*2 semester hour credits (2 cl., 3 lab.)*

### *B 5 Vertebrate Zoology*

This course deals with the comparative anatomy of the integument; the skeletal, muscular, digestive and respiratory systems of the principal classes of vertebrates. The laboratory work consists of detailed dissection of representative types.

*Pre-requisite: B 1*

*2 semester hour credits (2 cl., 3 lab.)*

### *B 6 Vertebrate Zoology*

Continues and presupposes course B 5. In this part of the course, the lectures deal with the comparative anatomy of the vascular, excretory, reproductive and nervous systems together with the organs of special sense of the principal classes of vertebrates. The laboratory work consists of detailed dissection of representative types.

*Preparation: B 5*

*2 semester hour credits (2 cl., 3 lab.)*

### B 7 *Animal Physiology*

This course deals with the functions of vertebrates with particular emphasis on mammalian and human physiology. Demonstrations are given from time to time and are arranged to correspond as closely as possible with the lecture work.

*Preparation:* B 6

*2 semester hour credits*

### B 8 *Animal Physiology*

A continuation of B 7.

*Preparation:* B 7

*2 semester hour credits*

### B 9 *Principles of Genetics*

This course deals with the laws of variation and inheritance; their application to man and to domestic animals and plants.

*Pre-requisite:* B 1, B 2

*2 semester hour credits*

### B 10 *Principles of Genetics*

A continuation of B 9.

*Preparation:* B 9

*2 semester hour credits*

### B 11 *Animal Histology*

The lectures deal with the normal microscopic anatomy of the cell, histogenesis, and the fundamental tissues of various invertebrates and vertebrates. The laboratory work illustrates the lectures by means of microscopic preparations.

*Pre-requisite:* B 6

*2 semester hour credits (2 cl., 2 lab.)*

### B 12 *Animal Histology*

Continues and presupposes course B 11. In this part of the course a detailed study is made of the normal microscopic anatomy of the organs of the lower and higher vertebrates. The laboratory work illustrates the lectures by means of microscopic preparations.

*Preparation:* B 11

*2 semester hour credits (2 cl., 2 lab.)*

### B 13 *Vertebrate Embryology*

The lectures deal with the early and late stages of development of the Amphioxus, the Teleost, and the frog. The laboratory work illustrates the lectures.

*Pre-requisite:* B 6

*2 semester hour credits (2 cl., 2 lab.)*



### *B 14 Vertebrate Embryology*

A continuation of B 13. In this part of the course the lectures deal with the early and late stages of development of the chick and pig. The laboratory work illustrates the lectures.

*Preparation: B 13*

*2 semester hour credits (2 cl., 2 lab.)*

### *B 15 Parasitology*

This course deals with the more important species of parasites and their relation to disease in man and the domestic animals. In this part of the course the parasitic protozoa and flat worms are considered.

*Pre-requisite: B 6*

*2 semester hour credits (2 cl., 2 lab.)*

### *B 16 Parasitology*

A continuation of B 15. In this part of the course the parasitic round worms and arthropods are considered.

*Preparation: B 15*

*2 semester hour credits (2 cl., 2 lab.)*

### *B 17 Mammalian Anatomy*

An advanced laboratory course in the dissection of a mammal. In this part of the course, the skeletal, muscular, digestive, and respiratory systems are considered.

*Pre-requisite: B 6*

*2 semester hour credits (1 cl., 6 lab.)*

### *B 18 Mammalian Anatomy*

A continuation of B 17. In this part of the course, the urogenital, circulatory, and nervous systems are considered together with the organs of special sense.

*Preparation: B 17*

*2 semester hour credits (1 cl., 6 lab.)*

### *B 19 Histological Technique*

This course is designed to present the fundamentals of histological technique. Lectures deal with the various methods of fixation, clearing, hardening, embedding, section cutting, and staining of various vertebrate, invertebrate, and plant tissues. Emphasis is laid upon the laboratory work, which consists of preparing histological slides.

*Preparation: B 12*

*2 semester hour credits (1 cl., 6 lab.)*

### B 20 *Histological Technique*

Continuation of course B 19.

*Preparation: B 19*

*2 semester hour credits (1 cl., 6 lab.)*

### B 21 *History of Biology*

A course treating the development of biological sciences from the earliest times to the present, and tracing the history of biological investigations.

*2 semester hour credits*

### B 22 *History of Biology*

A continuation of B 21.

*2 semester hour credits*

### B 61 *Seminar*

Assigned readings and written reports on selected topics. May be elected with the consent of the department by qualified seniors majoring in biology.

*2 semester hour credits*

### B 62 *Seminar*

A continuation of B 61.

*Preparation: B 61*

*2 semester hour credits*

### B 65 *Thesis*

See statement on Theses, page 132.

*3 semester hour credits*

### B 66 *Thesis*

A continuation of B 65.

*3 semester hour credits*

## *Chemistry*

### Ch 1 *General Chemistry*

A course designed for those who have had chemistry before entering college. The fundamental ideas of matter and energy; the properties of gases, liquids, and solids; molecular weights; equations, atomic structure, classification of the elements; ionic reactions; the chemistry of the non-metals; and radioactivity are among the topics which are covered in the course.

*4 semester hour credits (3 cl., 3 lab.)*

## Ch 2 General Chemistry

A continuation of Ch 1. Modern ideas covering the theory of solutions of electrolytes are discussed together with experimental facts. The chemistry of the metals is covered thoroughly, and time is devoted to an introduction to organic chemistry. The latter part of the course is given to qualitative analysis with particular emphasis on the laboratory work.

*Preparation:* Ch 1

*4 semester hour credits (3 cl., 3 lab.)*

## Ch 3 General Chemistry

A course intended for those who have not had chemistry in high school. The content is similar to that of Ch 1, but the treatment is such that no prior knowledge of chemistry is necessary.

*4 semester hour credits (3 cl., 3 lab.)*

## Ch 4 General Chemistry

A continuation of Ch 3.

*Preparation:* Ch 3

*4 semester hour credits (3 cl., 3 lab.)*

## Ch 9 Qualitative Analysis

The object of this course is to give the student knowledge of the various fundamental qualitative laws and principles. A portion of the time is devoted to the formulation of numerical terms which are essential to the understanding of the mass action law, ionic equilibria, solubility product, hydrolysis, and redox instants. The use of the newer spot tests is stressed and, where possible, their reactions explained. Whenever necessary, lectures demonstrating the various semi-micro techniques are given, as well as those designed to illustrate more fundamental properties of solutions.

*Pre-requisite:* Ch 1, Ch 2 or Ch 3, Ch 4      *3 semester hour credits (4 cl.)*

## Ch 11 Qualitative Analysis Laboratory

This course, which is carried out on a semi-micro scale, applies the material covered in Ch 9 to actual problems. After some preliminary experiments, certain procedures are combined and the separations and identifications made on both known and unknown solutions. Finally, these are combined into a complete, systematic scheme which is applied to artificially prepared mixtures and industrial materials. Careful manipulations, thoroughness in observation, and accuracy in arriving at conclusions are expected of each student.

*Must be taken concurrently:* Ch 9      *2½ semester hour credits (11 lab.)*

*Pre-requisite:* Ch 1, Ch 2 or Ch 3, Ch 4

### Ch 12 Quantitative Analysis

It is the purpose of this course to give to the student a realization of the scientific development of quantitative methods. Each of the major operations such as weighing, measurement of volumes, titration, filtration, ignition, and combustion, is considered from the standpoint of the theoretical principles involved, and with due consideration of the manipulative technique necessary.

This is followed by the combination of these operations and their application to actual analysis including a comprehensive study of volumetric methods and of the more elementary parts of gravimetric analysis.

As the correct calculation of analytical results is of no less importance than the actual procedures of analysis, a number of problems forms a very important part of the course.

*Preparation:* Ch 9

2 semester hour credits

*Must be taken concurrently:* Ch 14

### Ch 13 Quantitative Analysis

This course, a continuation of Ch 12, is similarly conducted. After consideration of the more advanced parts of gravimetric analysis and of systematic mineral procedures, the remainder of the course consists of a critical discussion of common technical methods, including the standard ones for the analysis of steel, non-ferrous alloys, fuels, oils, gas, water, fertilizers, foods, etc.

*Preparation:* Ch 12

2 semester hour credits

*Must be taken concurrently:* Ch 15

### Ch 14 Quantitative Analysis Laboratory

This is a laboratory course intended to illustrate by actual use the various analytical methods considered in Ch 12. After certain preliminary experiments designed to acquaint the student with the apparatus used, volumetric analysis, including acidimetry and alkalimetry, oxidation, reduction, and precipitation methods are taken up. This is followed by simple gravimetric analysis.

*Preparation:* Ch 11

1½ semester hour credits (7 lab.)

*Must be taken concurrently:* Ch 12

### Ch 15 Quantitative Analysis Laboratory

This course includes not only the usual illustrative gravimetric determinations, but also electrolytic, electrometric, combustion, and optical methods.

In the latter half of the course actual industrial methods are used so that at its completion the students should be able to perform satisfactorily any ordinary analysis.

*Preparation:* Ch 14

2 semester hour credits (9 lab.)

*Must be taken concurrently:* Ch 13



### Ch 31 Organic Chemistry

A study of the basic principles of the aliphatic organic compounds. The resemblance of classes is stressed, and emphasis is placed on genetic charts. The industrial significance of the subject is discussed to show the practical nature of organic chemistry.

*Preparation:* Ch 40

*2 semester hour credits*

*Must be taken concurrently:* Ch 33

### Ch 32 Organic Chemistry

A continuation of Ch 31, dealing with the preparation and characteristic reactions of the aromatic organic compounds. Special attention is given to polymerization, diazotization, dyes, and the use of catalysts, nitration, and sulfonation.

A few of the more important heterocyclic compounds are studied.

*Preparation:* Ch 31

*2 semester hour credits*

*Must be taken concurrently:* Ch 34

### Ch 33 Organic Chemistry Laboratory

Preparations and reactions designed to teach the laboratory technique involved in organic chemistry. The method of keeping notes in the work performed and reactions involved is stressed.

*Preparation:* Ch 40

*1 semester hour credit (5 lab.)*

*Must be taken concurrently:* Ch 31

### Ch 34 Organic Chemistry Laboratory

This is a continuation of Ch 33. The preparations in this course serve to acquaint the student with such types of chemical reactions as sulfonation, the Grignard reaction, the Perkins reaction, Skraup's synthesis, the Friedel-Crafts' reaction, and the preparation of dyes.

In addition to the manipulation techniques taught in Ch 33 this course introduces the use of vacuum distillations, fractional crystallization, and separations by physical and chemical means.

*Preparation:* Ch 33

*1 semester hour credit (5 lab.)*

*Must be taken concurrently:* Ch 32

### Ch 35 Organic Chemistry

A continuation of Ch 32, this course includes a study of the preparation and reactions of heterocyclic and alicyclic compounds.

*Preparation:* Ch 32

*2 semester hour credits*

*Must be taken concurrently:* Ch 37

### Ch 37 Organic Chemistry Laboratory

The purpose of this course is to familiarize the student with the chemical and physical tests used in qualitative organic analysis. A series of experiments, based on the classification of reactions of organic compounds, serves as a basis for the examination of simple liquid and simple solid compounds and the preparation of suitable derivatives of them.

*Preparation:* Ch 34

*2 semester hour credits (9 lab.)*

*Must be taken concurrently:* Ch 35

### Ch 40 Physical Chemistry

This course begins with a short resume of the field of physical chemistry and its relationship to the other courses in chemistry and chemical engineering. Atomic and molecular weights, and the properties of gases, liquids, solids, ionized, non-ionized, and colloidal solutions are then taken up.

*Pre-requisite:* Ch 12, Ch 14

*2½ semester hour credits (3 cl., 2 lab.)*

*Preparation:* Ch 13, Ch 15

### Ch 41 Physical Chemistry

A continuation of Ch 40, this course includes a consideration of the following topics: rates of reaction, homogeneous and heterogeneous equilibrium, and thermochemistry.

*Pre-requisite:* Ch 13, Ch 15

*3½ semester hour credits (4 cl., 4 lab.)*

*Preparation:* Ch 40

### Ch 42 Physical Chemistry

A continuation of Ch 41 including electrical conductance, electrolytic equilibrium, electrolysis, photochemistry, and atomic structure.

*Preparation:* Ch 41

*3½ semester hour credits (4 cl., 4 lab.)*

### Ch 48 Colloidal Chemistry

A study of the preparation and properties of suspensoids, emulsoids, emulsions, and gels.

*Pre-requisite:* Ch 41

*2½ semester hour credits (3 cl., 2 lab.)*

### Ch 51 Sources of Information

This course is intended to acquaint the chemical student with the constantly increasing volume of scientific literature pertaining to the field of chemistry.

After a brief outline of the entire field of scientific literature and a description of various methods of library procedure, the various available sources of scientific information are investigated. A series of individual library problems, in which the student is required to apply the information obtained in the classroom, forms a very important part of the course.

*Pre-requisite:* Ch 1, Ch 2 or Ch 3, Ch 4      1 semester hour credit (1 cl.)

### Ch 52 History of Chemistry

A study of the development of scientific theories and contributions of workers in the field of chemistry. Elective for students majoring in chemistry.

2 semester hour credits

### Ch 63 Advanced Chemistry

A survey of the most recent developments in physical chemistry and inorganic chemistry.

*Pre-requisite:* Ch 42      2½ semester hour credits (4 cl.)

### Ch 64 Advanced Chemistry

A survey of the most recent developments in organic chemistry theory and practice.

*Pre-requisite:* Ch 35      2½ semester hour credits (4 cl.)

### Ch 65 Thesis

Original experimental work carried out under the direction of some member of the chemistry department staff. Elective for qualified students majoring in chemistry.

*Pre-requisite:* Ch 42      3 semester hour credits (9 lab.)

### Ch 66 Thesis

A continuation of Ch 65.

*Pre-requisite:* Ch 42      4 semester hour credits (12 lab.)

### Ch 101 Advanced Physical Chemistry

A study of advanced topics in physical chemistry.

(For graduate students only.)      3 semester hour credits

### Ch 102 Advanced Physical Chemistry

A continuation of Ch 101.

(For graduate students only.)      3 semester hour credits

### Ch 103 *Advanced Organic Chemistry*

A study of special topics in advanced organic chemistry.

(For graduate students only.)

3 semester hour credits

### Ch 104 *Advanced Organic Chemistry*

A continuation of Ch 103.

(For graduate students only.)

3 semester hour credits

### Ch 105 *Graduate Thesis*

Thesis work for graduate students.

2-4 semester hour credits

### Ch 106 *Graduate Thesis*

Thesis work for graduate students.

2-4 semester hour credits

### Ch 107 *Graduate Thesis*

Thesis work for graduate students.

2-4 semester hour credits

### Ch 108 *Graduate Thesis*

Thesis work for graduate students.

2-4 semester hour credits

## *Co-ordination*

### C 1 *Vocational Conference*

This course is designed to bring about analytical thinking and systematic planning of the "after-graduation-employment" problem. It is conducted as an open discussion class by the Department of Co-operative Work. Each Co-ordinator has in class those students whom he has placed and supervised on co-operative work. Each student analyzes and applies to himself as the "product" the fundamental principles of merchandising. Prominent men who are leaders in the fields of employment counselling business, or engineering present the employers' viewpoints. Thus the graduating seniors are brought face to face during the year with one of the most important and perplexing problems of life, namely, how to "sell their services", thereby aiming to bring a co-ordinated training of theory and practice to a logical conclusion.

$\frac{1}{2}$  semester hour credit (2 cl.)



## C 2 *Vocational Conference*

This course is the sequel to C 1 and consists of the practical application of the techniques of job-getting which have been analyzed and discussed in that course. It is conducted on a conference rather than on a class basis, the major portion of the time being devoted to the planning and writing of letters to and securing interviews with prospective employers. It is intended that this course shall culminate in the attainment by each student of his after-graduation job.

*½ semester hour credit (2 cl.)*

## *Economics*

### Ec 1 *Economic Geography*

In order to provide an adequate background for the study of economics this first course emphasizes the economic resources of our country and the part played by these resources in the development of our modern industrial society. The course is more concerned with promoting the comprehension of basic concepts than with stressing encyclopedic knowledge of masses of details. In the latter part of the semester frequent use is made of motion pictures to illustrate the processes and peculiar economic characteristics of specific industries.

*4 semester hour credits (4 cl.)*

### Ec 2 *Commercial and Industrial History of the U. S.*

This course is designed to complete the factual background for the study of theoretical economics. The economic development of the United States is traced from the colonial period to the present with special emphasis upon the period since the Civil War. Stress is laid upon the importance of economic factors and changes in our history in the description of the development of manufacturing, agriculture, domestic and foreign commerce, finance and banking, transportation and labor organizations. Consideration is given to European developments which have been closely related to those of the United States.

*4 semester hour credits (4 cl.)*

### Ec 3 *Economic Principles*

A thorough grounding in the fundamental principles and laws of economics is the aim of this basic course. The main topics include the nature and organization of production, the nature and importance of wants, the relation of money and prices, the process of exchange, and the nature of international trade.

*2 semester hour credits*

### *Ec 4 Economic Principles*

A continuation of Ec 3. A careful analysis is made of the determination of price under conditions of competition and monopoly, and of the distribution of wealth and income in the form of wages, economic rent, interest, and profits. The elements of insurance are discussed in connection with profits.

*Preparation: Ec 3*

*2 semester hour credits*

### *Ec 5 Economic Problems*

In this course the application of economic principles to some of the major economic problems of modern society is emphasized. The problems studied include consumption, protective tariffs, and subsidies, labor problems such as unemployment and labor unions, and the business cycle.

*Preparation: Ec 3*

*2 semester hour credits*

### *Ec 6 Economic Problems*

A continuation of Ec 5. Among the problems considered are the following: price stabilization, the agricultural problem, the relation of government to business including control of monopolies and public utilities, insurance, public finance, and proposals for the remodeling and improving of the economic system.

*Preparation: Ec 5*

*2 semester hour credits*

### *Ec 7 Money and Banking*

This course, amplifying the more general treatment of money and credit in Ec 3 and Ec 4, considers the problems of monetary and banking control with particular emphasis upon the policies of the Federal Reserve System. Current developments are carefully considered.

*Pre-requisite: Ec 3, Ec 4*

*2 semester hour credits*

### *Ec 8 Business Cycles*

After a study of the conditions which underlie cyclical fluctuations in prices, volume of trade, physical production, and employment, a careful analysis is made of the more significant theories of the business cycle. The possibilities of controlling such fluctuations and of initiating recovery receive extended attention. Throughout the course emphasis is placed upon the current phase of the business cycle and its peculiar problems.

*Preparation: Ec 5, Ec 6*

*2 semester hour credits*

### *Ec 11 Labor Problems*

An intensive study of the labor problems of modern industry constitutes the content of this course. Unemployment and other grievances of the worker, including industrial accident and disease, inadequate wages, long hours, undesirable working conditions, child and woman labor, etc., are carefully analyzed. Labor unions, representing the workers' effort to solve the above problems, receive extended attention with an appraisal of their policies and accomplishments. Employee representation, profit-sharing plans and similar devices of the employer to meet the same problems are also examined critically. The attitude of our government toward these problems and its attempts to handle them are analyzed carefully. The suggestions of other groups and agencies in respect to these problems will be treated, e.g. co-operative movement, socialism.

*Pre-requisite: Ec 3, Ec 4*

*2 semester hour credits*

### *Ec 12 Economic Systems*

After developing various criteria for evaluating the different economic systems, the course proceeds to a comparative analysis of capitalism, co-operation, socialism, communism, and fascism. The problems of economic planning receive particular attention.

*Pre-requisite: Ec 3, Ec 4*

*2 semester hour credits*

### *Ec 14 International Economic Relations*

A careful examination of the important principles of international trade and finance precedes a critical survey of the international commercial policies of modern nations, with special reference to the United States. Such broader problems as the international control of raw materials, exchange restrictions, international cartels and the economic activities of the League of Nations and other international organizations are considered.

*Preparation: Ec 5, Ec 6*

*2 semester hour credits*

### *Ec 15 History of Economic Thought*

A critical review of the origin and development of economic thought. After a brief account of the contributions of Plato and Aristotle, the early Christian fathers, and the writers of the Middle Ages, each of the main schools of economic thought is taken up in turn: the Mercantilists, the Physiocrats, the Classical School, the Socialists, the Historical School, the Austrian School, and the Neo-Classical School.

*Preparation: Ec 5, Ec 6*

*2 semester hour credits*

*Ec 16 Advanced Economic Theory*

The course introduces the student to the more complex aspects of economic theory. Particular consideration is given to the major modern theoretical problems.

*Preparation: Ec 15*

*2 semester hour credits*

*Ec 17 Statistics*

This course is intended to give the student an understanding of statistical principles and methods and their practical application in the social sciences. A study is made of the nature, sources, collection, and organization of statistical facts; the presentation of such facts in tabular or graphic form, the various averages, measures of dispersion, and the construction and use of index numbers.

*2 semester hour credits*

*Ec 18 Statistics*

The major portion of this continuation of Ec 17, concerns the analysis of time series, and includes the methods of obtaining trends, seasonal indexes, and the measurement of cyclical variation. The application of correlation analysis in the field of social science is given extended attention.

*Preparation: Ec 17*

*2 semester hour credits*

*Ec 61 Seminar*

Assigned readings and written reports on selected topics. May be elected with the consent of the department by qualified seniors majoring in economics.

*2 semester hour credits*

*Ec 62 Seminar*

A continuation of Ec 61.

*Preparation: Ec 61*

*2 semester hour credits*

*Ec 65 Thesis*

See statement on Theses, page 132.

*3 semester hour credits*

*Ec 66 Thesis*

A continuation of Ec 65.

*3 semester hour credits*



*The following courses offered in the College of Business Administration may be counted as courses in economics:*

### *AC 1 Accounting I*

This course presents the fundamental principles of accounting theory and practice. Beginning with a consideration of the need for and the purpose served by accounting, a study of the balance sheet and operating statement is presented so that the ultimate purpose of accounting is understood before the mechanical methods of recording business transactions are presented. The course then takes up specific balance sheet accounts, the law of debit and credit, the theory of nominal accounts, construction and interpretation of accounts, the recording process, the trial balance, construction of financial statements, the need for adjustments at the end of the period, depreciation, deferred and accrued items.

*3 semester hour credits (3 cl., 2 lab.)*

### *AC 2 Accounting I*

This course continues the work of the first semester with increased emphasis placed on accounting and interpretation of accounts. The main topics covered are closing of books, starting the new period, comparative statements, control accounts, and the operation of petty cash systems.

*Preparation: AC 1*

*3 semester hour credits (3 cl., 2 lab.)*

### *FI 3 Business Finance*

The fundamental principles of finance are approached in this course from the point of view of the business man. A study is made of the two basic ways of financing, namely, equity and borrowed funds, and their use in original and expansion financing. In addition, consideration is given to working capital requirements and the distinctions between short-term and long-term financing.

*3 semester hour credits (4 cl.)*

### *FI 4 Business Finance*

A continuation of FI 3. This course deals with the application of the principles of finance to such problems as surplus, dividend and reserve policies, the relation of the corporation to banks and the investing public, and the problems of both trade and economic risk. The course includes an analysis of such combinations as trusts, holding companies, consolidations, and pools from both

the public and financial points of view. Analysis is also made of aspects of reorganization problems in the light of present legislation. The course concludes with an analysis of government and state agencies now supplementing private sources of business funds.

*Preparation: FI 3*

*3 semester hour credits (4 cl.)*

### *FI 12 Public Finance*

This course is concerned with the basic principles of governmental finance. After a study of the different kinds of taxes imposed by municipal, state, and federal governing bodies, attention is given to the "trend" in taxation, and the effects of governmental borrowing and tax policies. A large part of the course is devoted to an analysis of the sources of revenue such as commodity, highway, general property, poll, income, and death taxes.

*Preparation: Ec 6*

*2 semester hour credits*

### *IA 3 Personnel Administration*

A consideration of what modern industry is doing in making an application of science to the obtaining and retaining of an effective and co-operative working force. The student studies thoroughly personnel administration systems now in use including the preparation and use of many forms among which are the occupational description, application, and interview blanks, promotion charts, wage scale, personnel control charts, etc. In addition, such subjects as wage payment plans, profit sharing, the training of workmen, workers' security plans, employee representation, collective bargaining, and management relationships are given attention.

Provisions of the National Labor Relations Act and the Wages and Hours Act are discussed.

*3 semester hour credits (4 cl.)*

### *IA 4 Personnel Problems*

This course brings to the attention of the student an understanding of the related, yet varied, problems with which the modern personnel department is confronted. These include problems of guidance, placement, job evaluation, adjustment of rates, employee rating systems, development of complete, yet simple, personnel records, etc.

*3 semester hour credits (4 cl.)*

### *MA 1 Marketing Principles*

This course is designed to acquaint the student with the principles underlying the distribution of merchandise. The first part of the course is concerned with the basic structure of markets; the main functions of marketing such as assembling, grading, storing, buying, selling and financing of goods; and the general classification of commodities into major types for the purpose of analytical study. Attention is then turned to a detailed consideration of the activities of the several types of middlemen, the work of the commodity exchanges and co-operative marketing associations, and the development of chain stores, mail order houses, and department stores. Other topics considered are market risk, pricing, selling terms and discounts, hedging, advertising, and the legal aspects of price maintenance.

*3 semester hour credits (4 cl.)*

### *MA 2 Marketing Problems*

Using actual case material this course analyzes and suggests solutions to a wide variety of selling problems in typical industries and trades. It is aimed throughout to develop the analytical powers of the student so that he may decide a problem from the viewpoint of a marketing executive. Consideration is given to consumers' buying habits and buying motives, to the important types of retail and wholesale enterprise, and to an analysis of the channels of distribution with the object of formulating a basis for selecting suitable channels for various products. The marketing of industrial goods is studied including certain special problems such as hedging. Producer's co-operative marketing is also given attention.

*3 semester hour credits (4 cl.)*

## *Education*

**NOTE:** In addition to the courses listed, Ps 5 and Ps 6, Educational Psychology, may also be counted as courses in education.

### *Ed 1 History of Education*

Education is considered as the means by which nations have attempted to realize their social and spiritual ideals. This course traces the history of education from ancient times through the Greek and Roman periods, the Middle Ages, the Renaissance and Reformation, down to John Locke and the Enlightenment. The course is concerned with the development of points of view as well as with the details of organization and practice.

*2 semester hour credits*

### *Ed 2 History of Education*

Beginning with the emotional reaction against formalism in life as exemplified by Rousseau, this course takes up the immediate background of modern education and traces the development of national systems. The influence of such men as Pestalozzi, Herbart, Froebel, Spencer, Mann, Barnard, Dewey, and others is studied in detail. The course closes with a consideration of present tendencies in education.

*2 semester hour credits*

### *Ed 3 Educational Measurements*

The course concerns itself with current problems in the field of educational tests and measurements. Most of the lectures are given over to a discussion of the construction and use of new type objective tests, with particular reference to the field of secondary education. The relative merits of the essay and the objective examination are considered in connection with the problem of grades and grading systems. Enough elementary statistics is included to enable students to use intelligently the results of testing. Emphasis is placed upon the importance of an accurate interpretation of test data and upon the futility of indiscriminate testing.

*2 semester hour credits*

### *Ed 4 Educational Organization and Administration*

A study of the principles underlying the organization, administration, and supervision of secondary schools in the U. S. A. The course is illustrated with suitable problems taken from actual practice. It should be of special interest to students who contemplate teaching as a vocation.

*2 semester hour credits*

### *Ed 7 Comparative Education*

A discussion of the educational background and current theories and practices of England, France, and Germany. Emphasis is laid upon the bearing of European education on American practice. Much of the assigned reading is in current periodical literature, although a basic text is also used. Lectures, special reports, and class discussions comprise the media by which the course is conducted.

*2 semester hour credits*



*Ed 9 Educational Sociology*

The course considers the relationship between education and sociology. Educational objectives are set up from the findings of sociological research and the traditional curriculum is examined in the light of these objectives with a view towards its reconstruction. A critical attitude is maintained toward philosophical implications which will inevitably arise in the course.

*2 semester hour credits*

*Ed 10 Educational Philosophy*

A study of the relationship between the science of education and the philosophy of education is followed by a consideration of philosophies of education in the light of basic theses of the history of philosophy. Such topics as evolutionism, behaviorism, pragmatism, instrumentalism, and progressive education are viewed in the perspective of the history of philosophy.

*2 semester hour credits*

*Ed 11 Principles of Secondary Education*

A critical study of the aims, objectives and functions of secondary schools. Relations of the junior high school, the senior high school, and the junior college to American life are discussed.

*2 semester hour credits*

*Ed 12 Methods of Teaching in Secondary Schools*

A fundamental course in methods of teaching. Such topics as motivation, socialization, drill, specific techniques, attention and fatigue, use of books and laboratories are discussed.

*2 semester hour credits*

*English**E 1-A English I*

The aim of this course is to help the student attain competence in the understanding and evaluating of modern literature and in written expression. It includes a review of the structural essentials of the English language, various written assignments, and the study of essays and informational articles.

*3 semester hour credits*

### *E 2-A English I*

Continuing the general purposes of E 1-A, this course proceeds to a study of the special problems of description and narration, and to a critical reading of poems, short stories, and plays.

*3 semester hour credits*

### *E 5 Advanced Composition*

The technique of writing in the shorter literary form will be studied in detail and applied systematically toward the building up of the student's individual style. A part of the time each week will be devoted to personal conference between the student and the instructor.

*Pre-requisite: E 1-A, E 2-A*

*2 semester hour credits*

### *E 6 Advanced Composition*

A continuation of E 5.

*Preparation: E 5*

*2 semester hour credits*

### *E 7 Creative Writing*

For students interested in imaginative writing. Original papers by the students will be discussed in class and in weekly conference with the instructor. The principles underlying creative writing will be carefully studied.

*Preparation: E 6*

*2 semester hour credits*

### *E 8 Creative Writing*

Continued practice in creative writing supplemented by an analysis of the work appearing in the better magazines. The shorter forms will be emphasized.

*Preparation: E 7*

*2 semester hour credits*

### *E 9 Journalism I*

The newspaper technique, with practice in re-writing. The general tasks of an "inside" man and the functions of the editorial department.

*3 semester hour credits (4 cl.)*

### *E 10 Journalism I*

The problems of reporting and newswriting, with written assignments in all types of spot news reporting.

*Preparation: E 9*

*3 semester hour credits (4 cl.)*

### *E 11 Journalism II*

Editing the news. The writing of editorials, feature articles, and columns.

*Preparation: E 10*

*3 semester hour credits (4 cl.)*

### *E 12 Journalism II*

A general practice course in newspaper writing, the covering of special assignments, and editorial problems.

*Preparation: E 11*

*3 semester hour credits (4 cl.)*

### *E 13 Effective Speaking*

This course offers practical training in the preparation and presentation of the various types of speeches. The instruction is planned to eliminate defects of voice, posture, and delivery, and to develop in the student an ability to speak easily, naturally, and forcefully.

*1 semester hour credit (2 cl.)*

### *E 14 Effective Speaking*

Continued practice in impromptu and extempore speaking, organization of material, consideration of the audience, and vocabulary building, form the basis of the course.

*Preparation: E 13*

*1 semester hour credit*

### *E 15 Survey of English Literature*

A survey of English literature to 1800. After a brief study of the social and political background of each literary period, the writing of the period is considered, and the more important writers are studied and read in detail. The purpose of the course is to give the student an appreciation of English literature as a whole, and an intimate knowledge of its major figures.

*3 semester hour credits (4 cl.)*

### *E 16 Survey of English Literature*

A survey of English literature from 1800 to the present century. The outstanding writers are read, studied, and related to the general background of nineteenth-century England. The purpose of the course is to give the student an understanding of the writers who contributed most to the formation and development of modern literature in England.

*3 semester hour credits (4 cl.)*

### *E 17 English Drama Before Shakespeare*

A study of the origins and growth of English drama from its beginning to its culmination in the work of Shakespeare. A discussion of the morality plays will be followed by a careful consideration of the influence of Plautus, Terence, and Seneca on the dramatists of the age. Plays by Lyly, Peele, Greene, Kyd, and Marlowe will be read as a background for Shakespearean drama.

*2 semester hour credits*

### *E 18 Chaucer*

An introduction to the language and literature of Chaucer and his contemporaries, with special attention to *The Canterbury Tales*. The course includes a consideration of Chaucer's influence on the growth of the language, an examination of the "roman de tiroir" form, and a survey of the chief types of European popular narrative which *The Canterbury Tales* represents.

*2 semester hour credits*

### *E 19 Shakespeare*

The Elizabethan period, sixteenth century London, the Shakespearean stage and audience, and the actors' companies will be discussed. Shakespeare's life and his development as a dramatist will be carefully considered. Five plays will be intensively studied.

*2 semester hour credits*

### *E 20 Shakespeare*

Lectures will be given on Shakespeare's language, the text of the plays, Shakespearean criticism, editors' problems, etc. Four plays will be intensively studied. The sonnets will be read and discussed.

*2 semester hour credits*

### *E 21 Nineteenth Century Poetry I*

Background forces which shaped the Romantic period will be carefully studied; the influence of German idealists, of the French Revolution, and of the natural reaction from the classicism of Pope and Johnson will be analyzed and evaluated. Poetry of Wordsworth, Coleridge, Byron, Keats, and Shelley will be studied critically.

*2 semester hour credits*

### *E 22 Nineteenth Century Poetry II*

A study of the poetry of the Victorian era with emphasis on the writings of Browning and Tennyson. The influence of the age on its poets will be carefully considered.

*2 semester hour credits*



*E 23 Seventeenth and Eighteenth Century Prose*

A study of the important, non-fiction prose works of Bacon, Browne, Swift, Addison, Steele, Johnson, and Boswell, among others, with emphasis on the relationship of the literature to the age. The various prose styles will be discussed. A written paper will be required.

*2 semester hour credits*

*E 24 Nineteenth Century Prose*

An examination of significant nineteenth century writers as to their social, political, literary, and educational ideas. Lamb, Hazlitt, Carlyle, Macaulay, Newman, Ruskin, Arnold, Huxley, and Stevenson are among those to be considered. A written paper will be required.

*2 semester hour credits*

*E 25 American Literature to 1860*

A survey of American literature from colonial times to the triumph of the transcendental movement in New England. The work of Bryant, Irving, Cooper, Poe, Emerson, Thoreau, Lowell, Holmes, Longfellow, and Melville will be emphasized.

*2 semester hour credits*

*E 26 American Literature After 1860*

Continuing E 25, the course will consider the rise of realism after the Civil War, the development of American humor, the appearance of local color writers, and modern trends since 1900.

*2 semester hour credits*

*E 27 History of the English Novel*

This survey will trace the development of the novel from the 18th century to the beginning of the Victorian era. It will deal with the maturing of the novel form in the hands of Defoe, Richardson, Fielding, and Smollett; the "Gothic Romances" of Walpole and Lewis; and the novel of manners as seen in Jane Austen.

*2 semester hour credits*

*E 28 History of the English Novel*

This course will deal with the work of the Great Victorians, particularly Thackeray, Dickens, Eliot, Conrad, and Hardy. A few contemporary novels will be discussed. The student will be expected to read widely in the field.

*2 semester hour credits*

### *E 29 Great European Writers*

An introduction to the classics of Ancient and Medieval literature. The purpose of the course is to acquaint the student broadly with our literary heritage and to furnish him background for later studies in literature.

*2 semester hour credits*

### *E 30 Great European Writers*

A survey of the literature of Europe from the Renaissance to the beginning of the twentieth century.

*2 semester hour credits*

### *E 31 Comparative Drama*

Through the analysis of plays of various origins, this course shows the development of essential techniques in drama from period to period, and demonstrates how a general type of drama manifests special characteristics in accordance with the social and political backgrounds against which it is set. During this term the emphasis is placed on the classic literature of the Greek and Roman theater.

*2 semester hour credits*

### *E 32 Comparative Drama*

This course, a continuation of the study begun in E 31, deals with the representative plays of the Continent since 1600.

*2 semester hour credits*

### *E 33 Modern Literature 1895-1915*

Beginning with a study of late nineteenth-century literature in England and America, the course considers the principal literary developments of the period 1895 to 1915. New forms and methods in poetry, the novel, the short story, and the play are studied and are illustrated by the work of literary groups and movements and by such major writers as Walt Whitman and Henry James.

*2 semester hour credits*

### *E 34 Post-war Literature*

A survey of contemporary literature in England and America. Outstanding writers are studied in detail. Some of the subjects discussed are recent changes in form and technique; literary experiments; the effect on literature of the World War, and of recent social changes. During the course each student writes a paper and presents a class report on a contemporary author.

*2 semester hour credits*

### E 61 Seminar

Independent investigation of a selected topic together with intermediate research reports. May be elected with the consent of the department by qualified seniors majoring in English.

*2 semester hour credits*

### E 62 Seminar

A continuation of E 61. A final report is required which summarizes the research of the year.

*Preparation: E 61*

*2 semester hour credits*

## Geology

### Gy 1 General Geology

A study of earth movements and various terrestrial applications of solar energy. Lectures on fundamental general facts as to origin and movements of the earth, weathering, work of winds, underground and surface waters, glaciers and the glacial period, lakes and swamps, and vulcanism.

*2 semester hour credits*

### Gy 2 General Geology

Course Gy 1 is continued with such topics as mountain formation, oceans, oceanic life, atmosphere touching upon meteorology. A considerable portion of time is given to the study of igneous, sedimentary and metamorphic rocks, supplemented by laboratory and field work.

*2 semester hour credits*

### Gy 5 Historical Geology

A review of the beginning of the earth, its development and historical significance of rock characters. This is followed by a study of the pre-Cambrian Paleozoic and the early Paleozoic sub-era.

*2 semester hour credits*

### Gy 6 Historical Geology

Continuation of the first semester taking in the late Paleozoic sub-era, and the Mesozoic and Cenozoic periods, and continuing through the geologic history of man.

*2 semester hour credits*

## Government

### Gv 1 *American Government and Politics*

The study of our National Government with respect to its organization and function; its powers and limitations under the Constitution; its legislative, administrative, and judicial machinery under the party system of government and bureaucracy.

*3 semester hour credits*

### Gv 2 *American Government and Politics*

A more detailed study of the relationships of our federal, state, and municipal governments, including an analysis and comparison of the various state governments and types of municipal government with respect to state and local agencies for carrying out the executive, legislative, and judicial functions of government in a democratic country.

*3 semester hour credits*

### Gv 3 *Comparative Government*

The older governments of Europe, those principally of Great Britain and France, but also of Switzerland and the Scandinavian countries, are described and analyzed in this course. Institutions are compared in these various states with reference to America and the newer governments of Europe.

*2 semester hour credits*

### Gv 4 *Comparative Government*

A study of the newer governments of Europe, as found in Germany, Italy, and the Soviet Union. Democracy and dictatorship are analyzed as different modes of life and rule. These states are compared to each other, to the older governments of Europe, and to the United States.

*2 semester hour credits*

### Gv 5 *American Constitutional Law*

After a careful study of the influences affecting the framing of the Constitution, attention is turned to the leading constitutional principles of the American government as developed through judicial interpretation.

*2 semester hour credits*



### *Gv 6 American Constitutional Law*

A continuation of Gv 5. Primary emphasis is placed upon the relation of constitutional law to present day problems with particular reference to such items as "due process of law" and "inter-state commerce".

*Preparation: Gv 5*

*2 semester hour credits*

### *Gv 7 Origins of Political Theory*

A survey of political philosophy from Plato and Aristotle to Bentham. The nature, origin, forms, and ends of the state and government are covered.

*2 semester hour credits*

### *Gv 8 Modern Political Theory*

A critical study is made of the major developments in political theory since Bentham, with special reference to the influence of these developments upon American politics and political institutions. Attention is paid to the modern conflict between the democratic and the totalitarian conceptions of the state.

*2 semester hour credits*

*The following courses offered in the College of Business Administration may be counted as courses in government.*

### *PA 2 Public Administration I*

A study of career service of the local, state, and national government; the administrative positions in career service; the information needed by the government administrator in order to function effectively; and the means for acquiring public administration knowledge.

*3 semester hour credits (4 cl.)*

### *PA 5 Business and Government*

The object of this course is to develop a thorough understanding of the relationships between government and business. The attitude of our government towards business since 1885 as evidenced by legislative, judicial, and executive action will be analyzed in detail. Careful attention will be given the experience under the NRA and the attempts on the part of government and business to preserve the good features of the codes. Special consideration will be given to the part played by the administrative agency.

*2 semester hour credits (4 cl.)*

### *PA 7 Public Administration II*

A study of the subject matter and principles of management necessary for the efficient operation of the government.

*3 semester hour credits (4 cl.)*

### *PA 8 Public Administration III*

This course presents a study of the public relations, fiscal control, and policy making aspects of public administration, stressing the importance of co-operation among government bureaus, legislative bodies, and the public; and presents to the student an appreciation of the importance of versatility of ability for a successful public career.

*3 semester hour credits (4 cl.)*

## *History*

### *H 1 History of Civilization*

This is primarily a background course. Introductory lectures deal with primitive society, the development of language and writing, and the early contributions of Egypt and Asia. More detail is given to the structure of Greek and Roman society, the rise of the Christian Church, the barbarian invasions of the Empire, the growth of Islam, and the life of the early Middle Ages.

*4 semester hour credits (4 cl.)*

### *H 2 History of Civilization*

This course deals with the growth of the monarchies in Europe, the medieval Church, the art and literature of the Renaissance and Reformation, the economic revolution, the Age of Reason in France and England, the Old Regime and the Revolution in France, and the growth of science and industrialism.

*4 semester hour credits (4 cl.)*

### *H 5 Europe, 1789-1870*

This course aims at describing and interpreting the development of European states from the French Revolution to 1870. Major topics include the Metternich system, the emergence of French Republicanism, and the unification of Italy and Germany. Non-political factors receive much attention throughout the course.

*2 semester hour credits*

### *H 6 Europe, 1870-1938*

The international relationships which precipitated the tragedy of 1914 are considered. The rise of militarism and nationalism, secret diplomacy, propaganda and the press, the "incidents" which led to the World War, the conduct of the war, the peace treaties, and the rise of socialism and fascism are discussed in this course.

*2 semester hour credits*

### *H 7 England to 1688*

This course surveys the political, social, religious, and economic development of England to the Revolution of 1688. Political history receives the major emphasis, but stress is placed upon the rise of the English institutions which represented England's outstanding contribution to civilization.

*2 semester hour credits*

### *H 8 England since 1688*

A continuation of H 7. A study is made of Queen Anne's England, the policies of Walpole, England's part in European politics, the age of the first Reform Bill, English imperialism, and Victorian society.

*2 semester hour credits*

### *H 9 The United States to 1865*

This course is an interpretation of the events which shaped the American nation to the Civil War. Social customs, economic influences, racial contributions, and humanitarian movements are not neglected, though the political history is stressed.

*2 semester hour credits*

### *H 10 The United States Since 1865*

Major attention is given to the social, economic, and political foundations of recent history in this survey of the transition of America from an agricultural to an urban industrialized society since the Civil War. Consideration is given to the problems arising with the emergence of America as a world power.

*2 semester hour credits*

### *H 11 Latin American History*

This course deals with the European background of Spanish and Portuguese colonization in the New World, the exploits of the conquistadores, the Indian civilizations, colonial institutions, and the forces which gave rise to the revolutions in the early 19th century.

*2 semester hour credits*

### *H 12 Latin American History*

This course continues H 11, and describes the Wars of Independence and the rise of the republics. A study is made of the international relations of the Latin American countries, the Monroe Doctrine, and the Pan-American conferences.

*2 semester hour credits*

### *H 13 English Constitutional History*

This course is devoted to a consideration of the English constitution and of the common law; local government vs. central government; the origin and growth of Parliament; the development of the British cabinet system; and a comprehensive study of statutes and documents.

*3 semester hour credits (4 cl.)*

### *H 14 American Constitutional History*

In this course a study is made of the historical development of the United States Constitution with particular emphasis on its progressive adaptation to a changing social and economic order.

*3 semester hour credits (4 cl.)*

## *Mathematics*

### *M 1 College Algebra*

The study of algebra is scheduled to begin with the solution of the quadratic equation, simultaneous quadratics, and equations in quadratic form. However, a rapid but thorough review of the fundamentals of algebra precedes this. The solution of the quadratic is followed by a detailed study of the theory of exponents. Then follow radicals, series, variation, inequalities, and the elementary principles of the theory of equations. Considerable time is given to plotting and the use of graphs in the solution of equations. The elementary theory of complex numbers is also covered.

*3 semester hour credits*

### *M 3 Trigonometry*

This is a complete course in trigonometry and should enable the student to use all branches of elementary trigonometry in the solution of triangles as well as in the more advanced courses where the knowledge of trigonometry is essential. Some of the topics covered are the trigonometric ratios; inverse functions; goniometry; logarithms; circular measure; laws of sines, cosines, tangents, half angles; solution of oblique and right triangles;



transformation and solution of trigonometric and logarithmic equations. Considerable practice in calculation of practical problems enables the student to apply his trigonometry to problems arising in practice at an early stage. Additional work, graphical and algebraic, is done with the complex number, introducing De-Moivre's theorem and the exponential form of the complex number.

*2 semester hour credits (2 cl.)*

#### *M 4 Analytic Geometry and Introduction to Calculus*

This being a basic course in preparation for any further study of mathematics, it requires a thorough knowledge of the fundamentals of algebra. The course covers cartesian and polar coordinates; graphs; the equations of simpler curves derived from their geometric properties; thorough study of straight lines, circles, and conic sections; intersections of curves; transformation of axes; plotting and solution of algebraic equations of higher order and of exponential, trigonometric, and logarithmic equations; loci problems. The general equation of the second degree is thoroughly analyzed in the study of conic sections. Some time is devoted to curve fitting from empirical data.

Explicit and implicit functions, dependent and independent variables, some theory of limits, continuity and discontinuity are given special attention from both the algebraic and the geometric points of view. Some theorems on the infinitesimal are introduced, and a study is made of infinity and zero as limits. Relative rates of change, both average and instantaneous, and the meaning of the slope of a curve follow. The differential and the derivative as applied to algebraic functions with the geometric interpretation are then studied. Tangents to curves of the second degree follow here. Simple applications with interesting practical problems help to develop the interest here and lay a solid foundation for the study of the calculus. The introduction of the differential at the same time with the derivative helps considerably to bridge the large gap which usually exists when the student passes from the study of the elementary analytic geometry to the infinitesimal of calculus.

*Preparation: M 1, M 3*

*5 semester hour credits (5 cl.)*

#### *M 5 Differential Calculus*

The differential is introduced at the outset of the course, together with the derivative; geometric and practical illustrations are given of both; and both are carried along throughout the course. The work consists of differentiation of algebraic, trigonometric exponential, and logarithmic functions, both explicit and implicit;

slopes of curves; maxima and minima with applied problems; partial differentiation; parametric equations; derivatives of higher order; curvature; evolutes and involutes; points of inflection; related rates; velocities, acceleration; indeterminate forms; expansion of functions; series. Although the subject matter deals with considerable theory, constant sight is kept of the practical application of the theory. The geometric interpretation of every new subject is carefully defined, and problems are continually solved dealing in practical applications of the theory in geometry, physics, and mechanics.

*Pre-requisite:* M 1

*3 semester hour credits (4 cl.)*

*Preparation:* M 4

### M 6 *Integral Calculus*

This course, a continuation of M 5, deals with integration as the inverse of differentiation as well as the limit of summation. The topics covered are methods of integration; use of integral tables; definite integrals; double and triple integrals; areas in rectangular and polar co-ordinates; center of gravity; moment of inertia; length of curves; volumes of solids; areas of surfaces of revolution; volumes by triple integration; practical problems in work, pressure, etc., depending on the differential and integral calculus for solution; solution of simpler differential equations.

*Preparation:* M 5

*3 semester hour credits (4 cl.)*

### M 7 *Differential Equations I*

The elementary theory of differential equations and the method of solution of certain ordinary differential equations are offered here as a general course in mathematics. Although this is principally a problem course in solving differential equations, properties of the equations and of their solutions are deduced, and applications in the various fields of scientific work are analyzed.

*Preparation:* M 6

*2½ semester hour credits (4 cl.)*

### M 8 *Differential Equations II*

Special cases of first order equations are considered, and a fuller treatment of first order equations of higher degree leads to a consideration of envelopes, special loci, and particular curves. The general second order linear equation is studied, and the several well-known methods of attack are presented. Solution in series form of equations whose primitives are not made up of classified functions is studied. Elementary partial differential equations of the first and second orders, leading to a presentation of Fourier's Series, conclude the course.

*Preparation:* M 7

*3 semester hour credits (4 cl.)*

### M 9 *Higher Algebra*

Complex numbers and the elementary theory of vectors start this course. It continues with the solution of equations of the third and fourth degree, Horner and Sturm theorems, the solution of higher degree equations with the use of graphs. Some invariant forms are studied. Then follow general systems of equations with the complete study of determinants, and some of the elements of matrices. A study is made of the theory of elimination, linear dependence, and linear transformations. If time permits, a study is made of probability and related subjects.

*Pre-requisite:* M 1, M 3

*3 semester hour credits (4 cl.)*

### M 10 *Curve Analysis*

This course deals with the methods of approximation of roots; plotting; empirical equations; and alignment charts.

*Pre-requisite:* M 5

*3 semester hour credits (4 cl.)*

### M 11 *Solid Analytic Geometry*

The study of analytic geometry is extended here into three dimensions, mostly with rectangular co-ordinates, although cylindrical and spherical co-ordinates and the transformation between the three systems are also introduced. The equations of the first and second degree are analyzed. A study is made of line segments and angles; planes, linear equations in three variables; normal forms; systems of planes and angles; surfaces in general; quadric surfaces. Some work is done on general curves, certain special curves, surfaces of revolution, locus problems, and homogeneous co-ordinates.

*Pre-requisite:* M 4

*3 semester hour credits (4 cl.)*

### M 12 *Modern Geometry*

This course offers a brief outline of the history of geometry through the ages, especially the 19th century; analysis of geometry of the triangle and circle; systems of co-ordinates, linear dependence, transformations; principle of duality; poles and polars; harmonic division, cross ratios, and conical projection. Certain special theorems include those of Desargues, Pascal, and Brianchon.

*Pre-requisite:* M 4

*3 semester hour credits (4 cl.)*

### M 13 *Spherical Trigonometry*

This is a complete course in the study of spherical trigonometry, solving right and isosceles spherical triangles; Napier's rules; laws of sines, cosines, half-angles, and half-side formulas; Napier's



analogies. A detailed solution of oblique spherical triangles including areas follows. Considerable time is spent on the celestial sphere and the astronomical triangle and on navigation, calculation of latitude and longitude, bearing, and time.

*Pre-requisite:* M 3

*3 semester hour credits (4 cl.)*

### M 14 *History of Mathematics*

In this course a survey is made of the development of various branches of mathematics, and attention is given to the lives of men who have made outstanding contributions to mathematical science.

*2 semester hour credits*

### M 15 *Advanced Calculus*

No student should elect this course unless he is thoroughly familiar with the contents of courses M 5 and M 6. The subjects covered are continuity, indeterminate forms, applications of partial differentiation, vectors and differentiation of vectors, the complex variable, differentiation and functions of the complex variable, differentiation of integrals, envelopes.

*Pre-requisite:* M 6

*3 semester hour credits (4 cl.)*

### M 16 *Advanced Calculus*

This is a continuation of M 15. The course starts with work in differential equations and problems in damped vibration and the potential function. Other topics are the hyperbolic function; expansion in infinite series including Fourier series; integration of special forms with definite, multiple, and improper integrals; probability integral; Gamma function; Beta function; Bessel's function; line integrals and applications.

*Preparation:* M 15

*3 semester hour credits (4 cl.)*

### M 17 *Series*

Various types of series and their uses. Study of limits, infinite series, tests for various types of convergence; divergence; algebraic operations with series; integration and differentiation; applications and use of special series.

*Pre-requisite:* M 5, M 6

*3 semester hour credits (4 cl.)*

### M 18 *Theory of Equations*

This course is devoted more to the theory and analysis of equations and roots than to actual solutions. The properties of polynomials and continuity are studied. The complex number,



algebraic and geometric form, is reviewed. The solutions of quadratic, cubic, and quartic equations are discussed and analyzed with various theorems on roots. Proof is given of the fundamental theorems; other theorems discussed are the remainder theorem, Horner's and Newton's methods, limits of roots, Rolle's theorem, Descarte's rule, Sturm's theorem, Budan's theorem, and De-Moivre's theorem. Transformations are studied and an analysis is made of rational, irrational, complex, and multiple roots. Symmetric functions including the relation of roots and coefficients are also taken up. Some work is done with discriminants. The course closes with the theory of least squares and curve fitting.

*Preparation:* M 5, M 6

*3 semester hour credits (4 cl.)*

## *Modern Languages*

### *French*

#### *F 1 Elementary French*

A beginner's course stressing the essentials of grammar, practice in pronunciation, and progressive acquisition of basic vocabulary and current idiomatic expressions.

*3 semester hour credits (5 cl.)*

#### *F 2 Elementary French*

A continuation of F 1. Most of the time is devoted to the reading of simple texts with oral practice based on the material read.

*Preparation:* F 1

*3 semester hour credits (5 cl.)*

#### *F 3 Intermediate French*

In this course several texts of average difficulty are read and studied. The work includes a thorough review of grammar, oral practice based on the reading matter, memorizing of selected passages, dictation, study of idioms, vocabulary building, and outside reading.

*Preparation:* F 2

*3 semester hour credits (upperclass, 4 cl.)*

#### *F 4 Intermediate French*

A continuation of F 3, with an increasing amount of both class and outside reading.

*Preparation:* F 3

*3 semester hour credits (upperclass, 4 cl.)*

### F 5 *Advanced French*

This course aims to develop further the student's ability to read and speak French and to acquaint him with representative works of modern French literature. Some of the texts to be studied will deal with French geography, history, and civilization.

*Preparation:* F 4

3 semester hour credits (upperclass, 4 cl.)

### F 6 *Advanced French*

A continuation of F 5. The reading is mainly from writers of the second half of the 19th century.

*Preparation:* F 5

3 semester hour credits (upperclass, 4 cl.)

### F 7 *French Classicism*

This course is designed to furnish a comprehensive survey of the background and development of French literature of the 17th century and to aid the student in a critical interpretation of the most significant works of the period. The reading is mainly from the dramatic works of Corneille, Racine, and Moliere. Collateral reading and reports.

*Preparation:* F 6

2 semester hour credits

### F 8 *French Classicism*

A continuation of F 7. The works of La Fontaine, Descartes, and Pascal receive the major attention.

*Preparation:* F 6

2 semester hour credits

### F 9 *French Romanticism*

A study of the origins and development of the Romantic movement in French literature. The readings include significant selections from the novels of the principal writers of the Romantic school, as well as some of the more important Romantic dramas.

*Preparation:* F 6

2 semester hour credits

### F 10 *French Romanticism*

Continuing F 9, the course pursues further the study of the Romantic drama. The latter part of the term is devoted to the reading of selections of poetry from the works of Lamartine, Hugo, Musset, and others.

*Preparation:* F 6

2 semester hour credits

## German

### G 1 Elementary German

A beginner's course stressing the essentials of grammar, practice in pronunciation, and progressive acquisition of basic vocabulary and current idiomatic expressions.

*3 semester hour credits (upperclass, 5 cl.)*

### G 2 Elementary German

A continuation of G 1. Most of the time is devoted to the reading of simple texts, with oral practice based on the material read.

*Preparation: G 1*

*3 semester hour credits (upperclass, 5 cl.)*

### G 3 Intermediate German

In this course several texts of average difficulty are read and studied. The work includes a thorough review of grammar, oral practice based on the reading matter, memorizing of selected passages, dictation, study of idioms, vocabulary building, and outside reading.

*Preparation: G 2*

*3 semester hour credits (4 cl.)*

### G 4 Intermediate German

A continuation of G 3, with an increasing amount of both class and outside reading.

*Preparation: G 3*

*3 semester hour credits (4 cl.)*

### G 5 Advanced German

This course aims to develop further the student's ability to read and speak German and to acquaint him with representative works of modern German literature. The texts to be studied consist mainly of outstanding German "Novellen" of the 19th century.

*Preparation: G 4*

*3 semester hour credits (4 cl.)*

### G 6 Advanced German

A continuation of G 5. The reading consists chiefly of selections from contemporary German writers of prose.

*Preparation: G 4*

*3 semester hour credits (4 cl.)*

### G 7 *The Classical Period of German Literature*

This course aims to trace the development of German literature during the second half of the 18th century, beginning with the Storm and Stress period. The works of Lessing, Goethe, and Schiller will receive the major emphasis.

*Preparation:* G 6

*2 semester hour credits*

### G 8 *The Classical Period of German Literature*

A continuation of G 7. The readings will consist mainly of the later works of Goethe and Schiller.

*Preparation:* G 6

*2 semester hour credits*

### G 9 *German Literature of the Nineteenth Century*

This course will consider the chief tendencies in German literature from the beginning of Romanticism to the coming of Naturalism. Representative works of the principal writers of the period will be read and analyzed.

*Preparation:* G 6

*2 semester hour credits*

### G 10 *German Literature of the Nineteenth Century*

A continuation of G 9. Among the works to be read will be some of the outstanding dramas of the latter half of the century.

*Preparation:* G 6

*2 semester hour credits*

## *Spanish*

### *Sp 1 Elementary Spanish*

A beginner's course stressing the essentials of grammar, practice in pronunciation, and progressive acquisition of basic vocabulary and current idiomatic expressions.

*3 semester hour credits (5 cl.)*

### *Sp 2 Elementary Spanish*

A continuation of Sp 1. Most of the time is devoted to the reading of simple texts with oral practice based on the material read.

*Preparation:* Sp 1

*3 semester hour credits (5 cl.)*

### *Sp 3 Intermediate Spanish*

In this course several texts of average difficulty are read and studied. The work includes a thorough review of grammar, oral practice based on the reading matter, memorizing of selected passages, dictation, study of idioms, vocabulary building, and outside reading.

*Preparation:* Sp 2

*3 semester hour credits (upperclass, 4 cl.)*



### *Sp 4 Intermediate Spanish*

A continuation of Sp 3, with an increasing amount of both class and outside reading.

*Preparation: Sp 3*

*3 semester hour credits (upperclass, 4 cl.)*

## *Orientation*

This course, required of all first year students, is designed to make the entering student explicitly aware of those facts, principles, and techniques which are significantly related to the maintenance of his intellectual efficiency, to assist him in making desirable social adjustments in the college community, to help him make a wise choice in his upperclass field of specialization. Special effort is made to prepare the student to make an early and satisfactory adjustment to the conditions of the co-operative work. Lectures and individual conferences.

*No credit*

## *Philosophy*

### *Ph 1 Introduction to Philosophy*

This introductory course combines the historical and systematic approaches to the subject. The historical treatment includes a survey of the chief philosophers and the development of basic philosophical ideas. The systematic treatment presents the several types of philosophy, such as realism, materialism, idealism, and pluralism. The place of philosophy is considered in its relation to ethics, religion, and natural sciences. The course both acquaints the student with facts about philosophy and trains him to think philosophically.

*2 semester hour credits*

### *Ph 2 Problems of Philosophy*

The chief systems of thought are applied to what may be termed the persistent problems of philosophy. The problems are to be found in the fields of epistemology, teleology, and metaphysics. The following topics suggest representative problems which will be studied: the relation between mind and body, the nature and extent of freedom of the will, the validity of knowledge, and the bearing which the more recent views in physics and psychology have upon related philosophical problems.

*Preparation: Ph 1*

*2 semester hour credits*

### *Ph 3 History of Philosophy*

Beginning with the early Greek age period, the course traces the development of philosophical thought through the patristic and scholastic periods. A study is made of the transition from medieval to modern philosophy.

*2 semester hour credits*

### *Ph 4 History of Philosophy*

The first half of the course is a study of the period from Bacon to Kant; the second half begins with the time of Kant and ends with a consideration of present-day philosophers and their systems of thought.

*2 semester hour credits*

### *Ph 5 Philosophy of Religion*

Fundamental questions of religious belief are examined in the light of philosophy. Modern religions are compared with respect to their views on the nature of the Deity, the meaning of life, and the relationship between man and God. Further topics for study include the question of the validity of mysticism and intuitive knowledge of religious truth, the immortality of the soul, the meaning of the supernatural, the presence of natural evil, and the relation of morality to religion.

Students may take Philosophy of Religion without having had any other course in this department, although there is an advantage in having had the Introduction to Philosophy.

*2 semester hour credits*

### *Ph 6 Logic*

Formal logic is subordinated in this course to the more practical consideration of the methods of critical and reflective thought. Common fallacies in logic are indicated, and the student is given frequent exercises in correct reasoning. Attention is given to the principles of induction, deduction, verification, syllogism, and assumption. To assist the student to think clearly and correctly is the essential purpose of this modified course in logic.

*2 semester hour credits*

## *Physical Education*

### *Physical Training*

All first year students are required to take Physical Training. Health, strength, and vitality do not come by chance but by constant attention to those factors involved in their development. It is very essential for the student to acquire good habits of living.

The work in the course includes a formal calisthenic program, special exercise classes for the correction of postural defects, participation in the regular athletic program, including baseball, basketball, football, hockey, track, and many types of informal games. All members of the class are also required to learn to swim.

Students wishing to be excused from Physical Training because of physical defects are required to present a petition to the faculty supported by a physician's certificate.

*No credit*

### *PE 1 Hygiene*

One class hour a week is devoted to the study of information closely related to the Physical Training work and to personal and mental hygiene. For this class lecture, each student is assigned at least one hour of outside study based on the required textbook. The course includes enough of the fundamentals of physiology and anatomy to enable the student to understand such parts of the course as require some knowledge of these subjects.

*1 semester hour credit*

### *PE 5 Principles of Physical Education*

The course considers the place of physical education in the educational program in the United States. The development of physical education programs based on the changes in society from primitive to modern times is discussed, careful attention being given to the needs of the individual, as well as to the needs of the group. Relationship between medical service and the physical education department is considered, and methods of co-ordination between these two important departments are investigated. The history of physical education, in so far as it affects the modern program, is included in the course. Factors such as economic, social and political influences, which have an important effect on the conduct of the program, are also considered. School health programs are discussed, with particular emphasis upon the medical and physical examinations and tests and the procedures which follow. Diagnostic and remedial techniques, classroom hygiene, and principles of preventive and corrective exercise are discussed. The course also includes a consideration of the proper place occupied by interschool and intercollegiate athletics in the physical education program.

Required of all students electing Physical Education as a minor field.

*2 semester hour credits*

### *PE 6 Play and Recreation*

The purpose of this course is to prepare students for leadership of leisure time activities. It considers the biological and sociological aspects of play and its increasing importance in modern life. From a practical point of view the course deals with the problems faced by the director of leisure time activities in the community, in the school, or on the playground. The course should be of special interest to students who contemplate entering social work or teaching.

*2 semester hour credits*

### *PE 7 History of Physical Education*

To provide a valuable background for students in this field, this course traces the whole history of physical education from the days of the Greeks and the Romans up to the present. Attention is given to a number of special systems of training which have been developed in Europe.

The course is required of all students electing Physical Education as a minor field.

*2 semester hour credits*

### *PE 8 Administration of Physical Education*

This course is designed to acquaint the student in the field of physical education with many of the administrative problems which are likely to arise in connection with his work. The subject matter includes a consideration of the objectives of the physical education program, personnel required, and various allied subjects such as gymnasias, athletic fields, and the construction and maintenance of these units. The conduct of the athletic program including requirements for equipment, arrangements of schedules, coaching, meets, etc., is also included.

Required of all students electing Physical Education as a minor field.

*2 semester hour credits*

### *PE 9 Football*

This course is designed to furnish the student interested in football coaching with a thorough knowledge of the sport. Careful consideration is given to the fundamentals in discussing the plays of each position in the line and backfield. Various well-known offensive and defensive systems are discussed for the purpose of considering their general merits, as well as adaptations to particular situations. Training and conditioning, rules and interpretation, and officiating are given proper attention.

*2 semester hour credits*



### *PE 11 Track and Field Events*

The course considers the care and training of track athletes. Practice schedules, selection of material, conduct of meets, etc., are discussed. The viewpoint from which the topics are treated is that of the student of coaching technique. In connection with this course, action pictures taken from actual performances by world champions, together with moving pictures, are of great value in demonstrating the style and technique of track and field events.

*2 semester hour credits*

### *PE 12 Basketball and Baseball*

Various systems in use throughout the country are compared and contrasted. Team play, offense, defense, signal systems, training and conditioning, rules, and officiating are among the topics studied. The student in this course should acquire a thorough knowledge of all phases of the sports.

*2 semester hour credits*

## *Physics*

### *P 1-A Survey of the Physical Sciences*

The purpose of the course is to give a definite conception of the physical world to those students who ordinarily would not elect a science course but who need to know something about the contributions and the place of the physical sciences in contemporary civilization. This course begins with a study of the universe and solar system. Consideration is given to the principles of distance, mass and weight, and the simple dynamics of bodies. The earth is studied from the viewpoint of its geological, meteorological, and chemical aspects, these main fields introducing a non-mathematical discussion of magnetism, heat, and electricity.

*4 semester hour credits (4 cl.)*

### *P 2-A Survey of the Physical Sciences*

In this course, which continues P 1-A, the phenomena of light are taken up. Following this, consideration is given to spectroscopy and matter structure, the periodic table, acids, bases, salts, and organic compounds. The course concludes with a discussion of certain aspects of physics which are of practical importance in the household, such as heating, lighting, refrigeration, and electrical appliances.

*4 semester hour credits (4 cl.)*

### *P 1 Physics I*

A course in the study of the fundamental principles of the mechanics of physics. Some of the topics covered are simple harmonic motion, uniformly accelerated motion, friction, work, energy, power, fluid pressure, angular velocity, centripetal force, equilibrium under the action of a series of parallel forces, and equilibrium under the action of concurrent forces.

*3 semester hour credits*

### *P 2 Physics I*

This is a thorough course in magnetism and electricity, covering all the details within the scope of standard college texts on these subjects. All lectures are illustrated by means of lantern slides, motion pictures, and special apparatus.

*3 semester hour credits*

### *P 3 Physics II*

A course in the study of wave motion, sound, and light. Molecular mechanics and other fundamental principles of physics are stressed at the beginning.

*Preparation: P 1, P 2*

*2 semester hour credits*

### *P 4 Physics II*

The topics studied are thermometry, expansion of solids, liquids and gases, calorimetry, change of state including latent heat of fusion and vaporization (sublimation), triple point diagram, conduction and radiation, and the mechanical equivalent of heat.

*Preparation: P 1, P 2*

*2 semester hour credits*

### *P 5 Physics Laboratory*

This course consists of experiments in mechanics, light, electricity, and magnetism performed by each student, supplementing the lecture and classroom work of courses P 1, P 2, and 3. The experiments on mechanics include the use of the vernier, micrometers, and spherometer; the calculation of true weights; the funicular polygon; gyroscopic motion; simple harmonic motion; and the determination of areas by means of the planimeter. Other experiments in this course include plotting the magnetic field about a bar magnet and the determination of the pole strength and field strength of the magnet, the position of images in a combination of lenses, and one experiment on electrostatics.

*Preparation: P 1, P 2*

*1 semester hour credit (2 lab.)*

### *P 6 Physics Laboratory*

A continuation of the experiments started in P 5, including experiments on sound and heat. Some of the experiments of this course concern the modulus of elasticity, the determination of the velocity of sound, the coefficient of cubical expansion of mercury, the air thermometer, the determination of the mechanical equivalent of heat, the study of the maximum and minimum thermometers, and the use of the spectroscope in the study of the bright line and solar spectra. The experiments of this course supplement the class work of courses P 1, P 2, P 3, and P 4.

*Preparation: P 1, P 2*

*1 semester hour credit (2 lab.)*

### *P 9 Optics*

This is a course in the more advanced forms of geometrical optics and the study of physical optics.

*Preparation: P 3, M 6*

*3 semester hour credits (3 cl., 2 lab.)*

### *P 10 Optics*

Continuing P 9, a detailed study is made of physical optics with considerable time spent on modern spectroscopic theory.

*Preparation: P 9*

*3 semester hour credits (3 cl., 2 lab.)*

### *P 13 Acoustics*

A complete mathematical study of the modes of vibration of strings, pipes, membranes, and a consideration of vibrating systems in general.

*Preparation: P 3, M 6*

*3 semester hour credits (3 cl., 2 lab.)*

### *P 14 Acoustics*

A course in the application of the principles of P 13 to the problems of speech, audition, sound, filters, musical instruments, and the acoustics of auditoriums.

*Preparation: P 13*

*3 semester hour credits (3 cl., 2 lab.)*

### *P 15 Modern Physics*

Consideration is given to molecular relations, and then to atomic structure, quantum mechanics, and allied subjects.

*Preparation: P 4, M 7*

*3 semester hour credits (3 cl., 2 lab.)*

### P 16 Modern Physics

Radioactivity, artificial transmutation, nuclear structure, and the devices for studying these phenomena are here presented. Some time is also given to the Stark, Zeeman, and Raman effects, and to X radiation and cosmic rays.

*Preparation: P 15*

*3 semester hour credits (3 cl., 2 lab.)*

### P 65 Thesis

See statement on Theses, page 132.

*3 semester hour credits*

### P 66 Thesis

A continuation of P 65.

*3 semester hour credits*

### P 101 Theoretical Physics

Vector analysis, dynamics, hydrodynamics, thermodynamics, statistical mechanics.

*(For graduate students only.)*

*3 semester hour credits*

### P 102 Theoretical Physics

Kinetic theory of gases, electrical theory, magnetic theory, optics, spectra.

*(For graduate students only.)*

*3 semester hour credits*

### P 103 Quantum Mechanics

Quantum phenomena, Schrödinger equation, potential barriers, classical atomic dynamics, linear harmonic oscillator, rigid rotator.

*(For graduate students only.)*

*3 semester hour credits*

### P 104 Quantum Mechanics

The hydrogen atom, Van der Waal's forces, perturbation theory, the helium atom, the hydrogen molecule, valence bonds, radiation.

*(For graduate students only.)*

*3 semester hour credits*

### P 105 Applied Mathematics

Elliptical integrals, matrices, algebraic and trigonometric series, line and surface integrals, some differential equations of physics.

*(For graduate students only.)*

*3 semester hour credits*



*P 106 Applied Mechanics*

Applications of vectors to physics, probability, empirical formulas, curve fitting, conformal transformations of fields and charts.

(For graduate students only.)

3 semester hour credits

*P 107 Graduate Thesis*

Thesis work for graduate students.

2-4 semester hour credits

*P 108 Graduate Thesis*

Thesis work for graduate students.

2-4 semester hour credits

*P 109 Graduate Thesis*

Thesis work for graduate students.

2-4 semester hour credits

*P 110 Graduate Thesis*

Thesis work for graduate students.

2-4 semester hour credits

*The following courses offered in the College of Engineering may be counted as courses in physics:*

*ME 20 Applied Mechanics (Statics)*

The subjects treated are collinear, parallel, concurrent, and non-concurrent force systems in a plane and in space; the determination of the resultant of such systems by both algebraic and graphical means, special emphasis being placed on the funicular polygon method for coplanar force systems; the forces required to produce equilibrium in such systems; first moments; and problems involving static friction, such as the inclined plane and the wedge.

Pre-requisite: P 1

3 semester hour credits (4 cl.)

*ME 21 Applied Mechanics (Kinetics)*

The subjects treated are continuation of first moments as applied to varying intensity of force and to the determination of centers of gravity of areas and solids; second moments and the application to the determination of moment of inertia of plane and solid figures, radius of gyration, polar moment of inertia, product of inertia, principal axes; uniform motion, uniformly accelerated motion, variable accelerated motion, harmonic motion; simple pendulum, rotation, work, energy, momentum, and impact.

Preparation: ME 20

3 semester hour credits (4 cl.)

### ME 30 *Thermodynamics*

In this introductory course in the fundamentals of thermodynamics the following subjects are discussed: general theory of heat and matter; first and second laws of thermodynamics; equations of state; fundamental equations of thermodynamics; laws of perfect gases; properties of vapors including development and use of tables and charts; thermodynamic processes of gases, and saturated and superheated vapors; and the general equations for the flow of fluids.

*Preparation: P 4*

*3 semester hour credits (4 cl.)*

### EL 13 *Electrical Measurements I*

This course is designed to acquaint the student with the theory of precision measure as applied to electrical measurement in particular. Some of the subjects covered are theory of measurements, directly and indirectly measured quantities, recording of observations, rules of significant figures, classification of error, law of error, characteristics of error, and laws of average deviation. Most of the problems studied fall in the following two general classifications: (1) Given the precision measures of the directly measured quantities, to determine the precision measure of the indirectly measured quantity as calculated by the use of engineering equations which apply to measurements work. (2) Given the prescribed precision to be obtained in the indirectly measured quantity, to determine the precision measure of the directly measured components which enter into its calculations.

In this course parts and theory of operation of resistance devices galvanometers, ammeters, and voltmeters are discussed, the treatment of other instruments being taken up later in connection with their use. This is followed by a detailed discussion of the methods of measuring various electrical quantities: resistance, resistivity, conductance; D. C. electromotive force, current, power, and energy. This part of the work involves the student's use of visual indicating devices.

*2½ semester hour credits (4 cl.)*

### EL 14 *Electrical Measurements II*

Resistance, capacitance, inductance, magnetic induction, A. C. power, and energy are treated in this course, with a detailed discussion of the methods of measuring them. This phase of the subject involves the use of both visual and sound indicating devices, and includes some work on the uses of circuits and bridges designed for high frequency measurements and tube constant determination. The student is given a thorough discussion of the

construction, theory of operation, method of use, sources of error, etc., of the types of measuring instruments used in commercial work and in standardizing laboratories.

*2 semester hour credits*

### *EL 21 Electrophysics*

The first part of this course is concerned with Faraday's Rule and the extended Ampere Rule, divergence of electrical vectors, Poisson's equation, and Maxwell's field equations and wave equations. Study is then made of molecular activity, and various properties of and measurements on electrons.

*Pre-requisite: M 7*

*1 semester hour credit (2 cl.)*

### *EL 22 Electrophysics*

Continuing EL 21 the topics considered are photo-electricity, X-rays, atomic structure and the spectrum, vacuum tubes, radio-activity, and the modern physics of matter and waves.

*Preparation: EL 21*

*2 semester hour credits*

### *EL 23 Electrical Measurements Laboratory*

This course consists of a series of experiments emphasizing the principles developed in courses EL 13 and EL 14. The student becomes familiar with the standard apparatus used in testing laboratories. Particular stress is laid on the correct use of the apparatus, and precision discussions are required throughout.

The general experiments cover various methods of measuring resistance, resistivity, conductivity, electromotive force, current, inductance, mutual inductance, capacitance, hysteresis, etc.

Further experiments are made in cable testing, magnetic testing, wave form determination, and the use of special apparatus.

Thorough training in the principles of precision measure and measurements technique is also given and applied to each experiment performed.

*2 semester hour credits (3 lab.)*

### *EL 24 Advanced Measurements Laboratory*

This course concerns the use of laboratory and secondary standards and precision methods as applied to the checking of resistances, and the calibration of indicating and integrating instruments of various types.

It involves the use of the potentiometer, Weston laboratory standard instruments; precision model Kelvin Low Resistance and Carey-Foster Bridges; Westinghouse portable oscillograph,

cathode ray oscillograph; ordinary, reflex, and logarithmic vacuum tube voltmeters; Anderson Bridge, Edgerton Stroboscope; low, medium, and high frequency oscillators; vacuum tube bridge; potential phase shifters and rotating standard. The work includes testing for characteristics and investigation of the action of multi-electrode tubes, thyatron, tungar rectifier, artificial telephone line, and Piezo oscillating crystals.

Precision work is insisted on throughout. The student is trained to develop speed and quickness of manipulation but never at the expense of quality and accuracy of the work.

*2 semester hour credits (3 lab.)*

## Psychology

### *Ps 1 Introduction to Differential Psychology*

An elementary survey of the psychology of individual differences including personality differences together with a presentation of some of the practical applications of the findings of differential psychology.

*2 semester hour credits*

### *Ps 2 General Psychology*

An introduction to general experimental psychology. The topics include learning, memory, thought, imagination, motivation, emotion, sensation, and perception.

*Preparation: Ps 1*

*2 semester hour credits*

### *Ps 3 Experimental Psychology*

Introductory laboratory. Experiments on sensory and motor phenomena, perception, learning, memory, and thought. Provides practice in the organization, statistical treatment, and interpretation of experimental data. Lectures and demonstrations in addition to laboratory work.

*Pre-requisite: Ps 2*

*3 semester hour credits*

### *Ps 4 Differential Psychology*

Introductory laboratory. Requires the solution of miniature problems involving the procedures used in computing scale values for rank orders, constructing rating scales, questionnaires, and mental tests.

*Preparation: Ps 3*

*3 semester hour credits*



*\*Ps 5 Educational Psychology*

Considers the applications of psychological facts and principles to educational problems and practices.

Pre-requisite: Ps 2

2 semester hour credits

*\*Ps 6 Educational Psychology*

Continuation of Ps 5.

Preparation: Ps 5

2 semester hour credits

*Ps 7 Social Psychology of Everyday Life*

A course devoted to the psychological examination of some of the phenomena observable in everyday social life. These include customs, crazes, fashions, rumor, propaganda, crowds, leadership, competition, and co-operation.

Preparation: Ps 2

2 semester hour credits

*Ps 8 Social Psychology, Theory, and Methods*

A survey of the field of social psychological theory and an examination of the experimental techniques utilized in this field of psychology. Special emphasis is placed upon attitudes and their measurement.

Preparation: Ps 7

2 semester hour credits

*Ps 9 Psychology of Personality*

Presents a survey of historical and contemporary theories of the nature of personality. The problems of the generality of traits, the consistency of expression, and the relation of cultural factors to personality, growth, and integration will be discussed.

Pre-requisite: Ps 2

2 semester hour credits

*Ps 10 Abnormal Psychology*

An introduction to the field of psychopathology. The psychology of the neuroses and the minor disturbances of everyday life are emphasized. Interpretation of clinical findings in the light of some contemporary schools of psychology is included.

Preparation: Ps 9

2 semester hour credits

*Ps 11 Applied Psychology*

Methods of personality study: a survey and evaluation of procedures used in the study of personality in schools, clinics and business and industrial personnel departments.

Preparation: Ps 9

2 semester hour credits

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\*May be counted for credit in either Psychology or Education.

### *Ps 13 Psychological Testing*

The application of psychological test methods in educational and clinical settings. May be elected with the consent of the department by qualified seniors majoring in psychology.

*Pre-requisite: Ps 4*

*2 semester hour credits*

### *Ps 14 Advanced Experimental Laboratory*

Individual research. May be elected with the consent of the department by qualified seniors majoring in psychology.

*Pre-requisite: Ps 3*

*2 semester hour credits*

### *Ps 61 Seminar*

Assigned readings and reports in theoretical and historical problems. May be elected with the consent of the department by qualified seniors majoring in psychology.

*2 semester hour credits*

### *Ps 62 Seminar*

A continuation of Ps 61.

*Preparation: Ps 61*

*2 semester hour credits*

## *Sociology*

### *S 1 Introduction to Sociology*

In presenting a survey of the origins and sources of human society, this study provides orientation for the courses in principles and problems which follow. The several theories of organic evolution are discussed. The antiquity of man and basic anthropological data are considered. The racial and ethnic groupings of man are then studied in the light of biological, geographical, and cultural factors.

*2 semester hour credits*

### *S 2 Principles of Sociology*

Facts and principles basic to a general knowledge of the field of sociology are presented. The origins, forms, and forces of human associations are discussed. Consideration is given the several leading schools of sociological thought. The course is designed to meet the needs of the student who desires only an elementary survey of the subject as well as the student who plans to take advanced courses in social science.

*2 semester hour credits*

### S 3 *Social Problems*

Attention is given the nature, complex causation, and inter-relatedness of social problems in general. Cultural change with its attendant lags, as well as other social forces and conflicts, are studied. While sociological theory is occasionally introduced to clarify the problem at hand, the course is essentially practical in character. Such problems as poverty and unemployment, race antagonisms, population pressures, and the broken home are considered. Optional field trips to various institutions give concreteness to the problems studied.

*Preparation:* S 1, S 2

*2 semester hour credits*

### S 4 *Social Pathology*

Similar to the course in Social Problems in background and approach, this study deals with the maladjustments and ills of human society. Emphasis is given those pathological conditions which exist in relations between the individual and the group. Typical subjects presented include mental defectiveness and disease, alcoholism and drug addiction, suicide, delinquency and crime, and pathologies of domestic relations. The field trips arranged for this course add to the practical knowledge of the social ills which are studied.

*Preparation:* S 1, S 2

*2 semester hour credits*

### S 5 *Criminology*

Delinquency and crime are defined and classified, and their causal factors indicated. The various theories as to what makes criminals are dealt with, and a brief history of crime is sketched. Legal and economic aspects of crime are summarized, but the study is mainly sociological. Prevention and correction of criminal behavior are stressed. Local institutions are visited.

*Preparation:* S 1, S 2

*2 semester hour credits*

### S 6 *Penology*

Closely related to S 5, this subject begins with an historical treatment of the punishment of criminals. Time is devoted chiefly to an understanding of modern methods and problems of dealing with offenders. Field trips are taken to criminal courts and penal institutions.

*Preparation:* S 5

*2 semester hour credits*

### *S 7 Principles of Social Ethics*

To clarify the meaning of morality in social relations is the aim of this study. Right and wrong conduct is analyzed in the light of the highest values for human society. Moral laws are discussed, and the various systems of ethics are evaluated. Scientific attitudes are encouraged in order that one's moral judgments may be compatible with one's best reflective thought.

*Preparation: S 1, S 2*

*2 semester hour credits*

### *S 8 Problems in Social Ethics*

Problems arising from differences in moral standards found in the various social groups will be examined. The question of ethical relativism and determinism will be considered. A selected number of specific problems in social ethics will be discussed.

*Preparation: S 7*

*2 semester hour credits*

### *S 9 The Family*

The historical development of the family is first traced, after which the course focuses upon the modern family. The monogamic family is contrasted with other types, and such unconventional forms as companionate and trial marriages are evaluated. Then follows an intensive study of family problems.

*Preparation: S 1, S 2*

*2 semester hour credits*

### *S 10 The Family*

A continuation of S 9. A constructive program is presented for strengthening the family as a basic unit in society.

*Preparation: S 9*

*2 semester hour credits*

### *S 11 Social Control*

The methods by which social forces are controlled provide the fundamental material of the course. External and internal types of control of the social organism are discussed. The use of violence, the power of public opinion, and the application of certain principles of social psychology are examined.

*Preparation: S 3, S 4, Ph 2*

*2 semester hour credits*

### *S 12 Social Progress*

The historical development of the theory of progress, contemporary concepts of social progress, the agents of progress, and the phenomenon of regression are several of the subjects for study.

*Preparation: S 11*

*2 semester hour credits*



### *S 13 Population Problems*

Population pressure, contrasts between urban and rural population, migration, and pertinent types of social mobility are studied in this course. After a brief survey of population problems in several areas of Europe and the Orient, attention is then given to a careful analysis of population conditions in the United States. The many factors are shown which intensify the problem in our country in spite of its wide area. What principles have superseded those of Malthus? What immigration policies are most sound for our country in the long run? What methods can be adopted which will relieve the population pressure in our great cities? Such questions as these will be discussed.

*Preparation: S 1, S 2*

*2 semester hour credits*

### *S 14 Urban Sociology*

Upon studying the complex human society found in the various cities of the world, this course then turns to an analysis of the modern American city. Its types, social values, and pathological elements are discussed. Methods of city planning are considered. The belief on the part of some sociologists that democracy is doomed by its cities is examined in the light of typical problems of urban society.

*Preparation: S 1, S 2*

*2 semester hour credits*

### *S 15 History of Sociological Thought*

With emphasis upon modern authorities, this course surveys the chief systems of sociological thought and the personalities who have made outstanding contributions to the field. Such leading thinkers as Sumner, Ward, Gumpowicz, Durkheim, and Pareto are studied. The relation of sociological theory to contemporary world movements is stressed.

*Preparation: S 3, S 4, Ph 2*

*2 semester hour credits*

### *S 16 Sociology of Religion*

Religious beliefs, practices, and institutions are examined and evaluated in relation to their effects upon society at large. The great religions of the world are compared in the light of their contributions to the well-being and progress of mankind. The social creeds of the several leading denominations in America are discussed with respect to their attitudes towards race, industry, war, and other social problems. The influences of organized religion upon politics and educational institutions are given attention.

*Preparation: S 3, S 4*

*2 semester hour credits*

### S 61 Seminar

Assigned readings and reports on selected topics. May be elected with the consent of the department by qualified seniors majoring in sociology.

*2 semester hour credits*

### S 62 Seminar

A continuation of S 61.

*Preparation: S 61*

*2 semester hour credits*

### S 65 Thesis

See statement on Theses below.

*3 semester hour credits*

### S 66 Thesis

A continuation of S 65.

*3 semester hour credits*

## Theses

A thesis in the College of Liberal Arts is considered to be an essay involving the statement, analysis, and solution of some problem in a special field. Its purpose is to demonstrate a satisfactory degree of initiative and power of original thought and work on the part of the candidate. A mere resume of existing knowledge in some subject is not acceptable. This, it is true, must usually be made, but in addition thereto the student must show his ability to deal constructively with the data he has collected and his power to draw significant and reliable conclusions from his investigations. The completed thesis will be examined for acceptance or rejection from the technical viewpoint by the major departments interested and then forwarded to the Secretary of the Faculty. Final approval of the thesis rests with the Dean. When it is accepted, the thesis becomes the property of the college and is not to be printed, published, nor in any other way made public except in such manner as the major department and the Dean shall jointly approve.

Frequently thesis subjects may be chosen on problems arising where the student is employed at co-operative work. Employers are usually glad to consult with the student in the selection of the subject and the subsequent development of the thesis.

When theses are conducted in this manner, it is understood that the employer is not expected by the University to assume any expense of the thesis nor to furnish any supplies or equipment

to be used in the development of the thesis other than those which he may consider it advisable and desirable to place at the disposal of the students. The regulations governing the use of laboratories and buildings of the co-operating firms will vary in practically all cases and each student must naturally be governed definitely by the regulations existing at the plant where the thesis is to be conducted.

It is understood that the thesis work must not in any way interfere with the regular required co-operative work and must be done during hours distinctly outside of regular co-operative work hours unless special request is made by the co-operating firm for some other arrangement.

Theses conducted in conjunction with co-operating firms must be submitted in duplicate, one copy to be presented by the Dean to the co-operating employer.

Theses are not required of seniors in the College of Liberal Arts. To certain students who wish to do so, however, the privilege of writing a thesis may be granted by the Faculty Committee on Theses in accordance with the following regulations:

1. To be eligible to write a thesis a student must have attained a scholastic average of at least 2.0 or better through his middler year and the first half of his junior year.
2. Students who have met this minimum requirement may petition for the privilege of substituting a thesis for formal classroom work.
3. In his petition the student must state the subject which he proposes to investigate and give a brief statement of the purpose and scope of the proposed thesis.
4. Petitions for the privilege of writing theses must be submitted in writing to the head of the student's major department not later than the middle of the second term of the junior year.

# NORTHEASTERN UNIVERSITY

## *Courses of Instruction Offered in the Day Colleges*

Certain of the courses here listed are offered only in alternate years, and the University reserves the right to withdraw any course in which there is insufficient enrollment.

Courses not included in the prescribed curricula (pages 71 to 73) may be taken only after approval by the student's faculty adviser. Except where otherwise indicated, electives are not open to freshmen.

Pre-requisite courses are divided into two groups. Those courses printed in regular type (AC2) must have been completed with passing grades before a student will be permitted to register for the advanced courses to which they apply. Those courses printed in italics (B3) are of such a preparatory nature that a student undertaking an advanced course without having had the preparatory courses specified, will ordinarily find himself greatly handicapped, and he may not register in the advanced course without the consent of the instructor.

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College*	Curriculum	Yr.
<i>Accounting</i>								
AC1	Accounting I		3	3	2	BA	All	2
AC2	Accounting I		3	3	2	BA	All	2
AC3	Accounting II	AC2	3	3	2	BA	All	3
AC4	Accounting II	AC2	3	3	2	BA	All	3
AC5	Cost Accounting	AC4	3	2	2	BA	I & IV	4
AC6	Cost Accounting	AC4	3	2	2	BA	I & IV	4
AC7	Accounting Problems	AC4	3	4	0	BA	I & II	4
AC8	Accounting Problems	AC4	3	4	0	BA	I	4
AC9	Income Tax and Public Accounting	AC4	3½	4	0	BA	I	5
AC10	C.P.A. Problems	AC4	3½	4	0	BA	I	5
<i>Biology</i>								
B1-A	General Biology		4	4	3	LA	Elective	1
B1	General Zoology		3	2	2	LA	Biology	2
B2	General Botany		3	2	2	LA	Biology	2
B3	Invertebrate Zoology	B1	2	2	3	LA	Biology	3
B4	Invertebrate Zoology	B3	2	2	3	LA	Biology	3
B5	Vertebrate Zoology	B1	2	2	3	LA	Biology	3
B6	Vertebrate Zoology	B5	2	2	3	LA	Biology	3
B7	Animal Physiology	B6	2	3	0	LA	Biology	
B8	Animal Physiology	B7	2	3	0	LA	Biology	
B9	Principles of Genetics	B1,2	2	3	0	LA	Biology	
B10	Principles of Genetics	B9	2	3	0	LA	Biology	
B11	Animal Histology	B6	2	2	2	LA	Biology	
B12	Animal Histology	B11	2	2	2	LA	Biology	
B13	Vertebrate Embryology	B6	2	2	2	LA	Biology	
B14	Vertebrate Embryology	B13	2	2	2	LA	Biology	
B15	Parasitology	B6	2	2	2	LA	Biology	
B16	Parasitology	B15	2	2	2	LA	Biology	
B17	Mammalian Anatomy	B6	2	1	6	LA	Biology	
B18	Mammalian Anatomy	B17	2	1	6	LA	Biology	

\*NOTE: BA = College of Business Administration.  
LA = College of Liberal Arts.  
Eng = College of Engineering.



No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Biology — Continued</i>								
B19	Histological Technique	B11	2	1	6	LA	Biology	
B20	Histological Technique	B19	2	1	6	LA	Biology	
B21	History of Biology		2	3	0	LA	Biology	
B22	History of Biology		2	3	0	LA	Biology	
B50	General Biology		4	4	3	Eng,BA	Elective	
B61	Seminar		2	3	0	LA	Biology	
B62	Seminar	B61	2	3	0	LA	Biology	
B65	Thesis		3			LA	Biology	
B66	Thesis		3			LA	Biology	
<i>Biography</i>								
By50	Men of Science		2	3	0	Eng,BA	Elective	
<i>Co-ordination</i>								
C1	Vocational Conference		1½	2	0	LA	All	5
C2	Vocational Conference		1½	2	0	LA	All	5
C7	Engineering Conference		1½	2	0	Eng	All	5
C8	Engineering Conference		1½	2	0	Eng	All	5
C11	Business Conference		1½	2	0	BA	All	5
C12	Business Conference		1½	2	0	BA	All	5
<i>Chemistry</i>								
Ch1	General Chemistry		4	3	3	Eng,LA	All,Eng LAPure & Applied Science	1 1 1
Ch2	General Chemistry	Ch1	4	3	3	Eng,LA	All,Eng LAPure & Applied Science	1 1 1
Ch3†	General Chemistry		4	3	3	Eng,LA	All,Eng LAPure & Applied Science	1 1 1
Ch4†	General Chemistry	Ch3	4	3	3	Eng,LA	All,Eng LAPure & Applied Science	1 1 1
Ch9	Qualitative Analysis	Ch1,2	3	4	0	Eng,LA	IV(E), LACchem	2
Ch11	Qualitative Anal. Lab.	Ch1,2,9	2½	0	11	Eng,LA	LACchem	2
Ch12	Quantitative Analysis	Ch1,2,9	2	3	0	Eng,LA	LACchem	2
Ch13	Quantitative Analysis	Ch1,2,12	2	3	0	Eng,LA	LACchem	3
Ch14	Quantitative Anal. Lab.	Ch1,2,11,12	1½	0	7	Eng,LA	LACchem	2
Ch15	Quantitative Anal. Lab.	Ch14	2	0	9	LA	Chem	3
Ch17	Quantitative Anal. Lab.	Ch1,2,13,14	1	0	5	Eng,LA	IV(E), LACchem	3
Ch31	Organic Chemistry	Ch1,2,40	2	3	0	Eng,LA	IV,LACchem	4
Ch32	Organic Chemistry	Ch31	2	3	0	Eng,LA	IV,LACchem	4
Ch33	Organic Chem. Lab.	Ch1,2,31,40	1	0	5	Eng,LA	IV,LACchem	4
Ch34	Organic Chem. Lab.	Ch32,33	1	0	5	Eng,LA	IV,LACchem	4
Ch35	Organic Chemistry	Ch32	2	3	0	Eng,LA	IV(E), LACchem	5
Ch37	Organic Chem. Lab.	Ch34,35	2	0	9	LA	Chem	5
Ch39	Organic Chem. Lab.	Ch34,35	1	0	5	Eng	IV	5

†Note: Students who have had no high school chemistry take Ch3 and Ch4 instead of Ch1 and Ch2.

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Chemistry — Continued</i>								
Ch40	Physical Chemistry	Ch12,14,13,17	2½	3	2	Eng,LA	IV(E), LACChem	3
Ch41	Physical Chemistry	Ch40	3½	4	4	LA	Chem	4
Ch42	Physical Chemistry	Ch41	3½	4	4	LA	Chem	4
Ch45	Physical Chemistry	Ch13,17,40	3	4	2	Eng	IV	4
Ch46	Physical Chemistry	Ch45	3	4	2	Eng	IV	4
Ch48	Colloidal Chemistry	Ch41	2½	3	2	LA	Chem	
Ch51	Sources of Information	Ch1,2	1	1	0	Eng,LA	{IV—Eng LACChem	2 2
Ch52	History of Chemistry	Ch1,2	2	3	0	Eng,LA	Elective	
Ch63	Advanced Chemistry	Ch42	2	3	0	LA	Chem	5
Ch64	Advanced Chemistry	Ch35	2½	4	0	LA	Chem	5
Ch65	Thesis	Ch42	3	0	9	LA	Chem	
Ch66	Thesis	Ch42	4	0	12	LA	Chem	
Ch101	Adv. Physical Chemistry		3			LA	Graduate	
Ch102	Adv. Physical Chemistry		3			LA	Graduate	
Ch103	Adv. Organic Chemistry		3			LA	Graduate	
Ch104	Adv. Organic Chemistry		3			LA	Graduate	
Ch105	Graduate Thesis		2-4			LA	Graduate	
Ch106	Graduate Thesis		2-4			LA	Graduate	
Ch107	Graduate Thesis		2-4			LA	Graduate	
Ch108	Graduate Thesis		2-4			LA	Graduate	

*Chemical Engineering*

ChE1	Flow of Fluids	PI	2	3	0	Eng	IV	3
ChE2	Industrial Stoichiometry	Ch12,13	2	3	0	Eng	IV	3
ChE3	Unit Operations	ChE1	3	4	0	Eng	IV	4
ChE4	Unit Operations	ChE2,3	3	4	0	Eng	IV	4
ChE5	Unit Operations Lab.	ChE3	1½	0	4	Eng	IV	4
ChE6	Unit Operations Lab.	ChE4	1½	0	4	Eng	IV	4
ChE7	Inorganic Chem. Tech.	Ch9,ChE2	2	3	0	Eng	IV	5
ChE8	Organic Chem. Tech.	Ch32,ChE4	2	3	0	Eng	IV	5
ChE9	Chem. Process Lab.	ChE4	3	1	6	Eng	IV	5
ChE10	Chem. Eng. Projects	ChE4	4	1	6	Eng	IV	5
ChE11	Chem. Eng. Thermo- dynamics	Ch46	2	3	0	Eng	IV	5
ChE12	Engineering Materials		2	3	0	Eng	IV	5

*Civil Engineering*

CI3	Surveying I	M3	1½	3	0	Eng	I	2
CI4	Surveying II	CI3	2½	4	0	Eng	I	2
CI5	Surveying I, F & P	D1,CI3	1	0	5	Eng	I	2
CI6	Surveying II, F & P	CI4,5	1	0	5	Eng	I	2
CI7	Surveying III	CI3,4	2	3	0	Eng	I	3
CI8	Surveying IV	CI7	2	3	0	Eng	I	3
CI9	Surveying III, F & P	CI5,6	1	0	5	Eng	I	3
CI10	Surveying IV, F & P	CI8,9	1	0	5	Eng	I	3
CI11	Hydraulics	ME20,21	2½	4	0	Eng	I,II,III,V	3
CI12	Hydraulics	CI11	2	3	0	Eng	I,II,V	3
CI15	Theory of Structures	ME22,23	3	4	0	Eng	I	4
CI16	Theory of Structures	CI15	3	4	0	Eng	I	4
CI21	Sanitary Engineering	CI11,12	2	3	0	Eng	I	4
CI22	Sanitary Engineering	CI21	2	3	0	Eng	I	4
CI23	Engineering Structures	CI15,16,ME23	3	4	0	Eng	I	5
CI24	Engineering Structures	CI23	3	4	0	Eng	I	5
CI25	Concrete	ME23	2	3	0	Eng	I	5

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Civil Engineering — Continued</i>								
CI26	Concrete	CI25	2	3	0	Eng	I	5
CI29	Design of Structures	CI23,25	3	2	6	Eng	I	5
CI30	Design of Structures	CI24,26,29	3	2	6	Eng	I	5
CI31	Highways	CI7,9	2	3	0	Eng	I	5
CI32	Highways	CI31	2	3	0	Eng	I	5
<i>Drawing and Graphic Arts</i>								
D1	Graphics I		3	0	6	Eng,LA	{E,All LA,Applied Science	1
D2	Graphics II	D1	3	0	6	Eng,LA	{E,All LA,Applied Science	1
D3	Engineering Drawing	D1	2	0	6	Eng	III	2
D4	Machine Drawing	D1	2	0	6	Eng	II,V	2
<i>English</i>								
E1	English I		3	3	0	Eng	All	1
E2	English I		3	3	0	Eng	All	1
E1-A	English I		3	3	0	LA	All	1
E2-A	English I	E1-A	3	3	0	LA	All	1
E1-B	English		3	3	0	BA	All	1
E2-B	English		3	3	0	BA	All	1
E3-B	Report Writing		2	3	0	BA	All	2
E4-B	Business Correspondence		2	3	0	BA	All	2
E5-B	Adv. Report Writing		2	3	0	BA	All	5
E5	Advanced Composition	E2-A	2	3	0	LA	Elective	
E6	Advanced Composition	E5	2	3	0	LA	Elective	
E7	Creative Writing	E6	2	3	0	LA	English & J.	3
E8	Creative Writing	E7	2	3	0	LA	English & J.	3
E9	Journalism I		3	4	0	LA,BA	{LAJour BA IV	3
E10	Journalism I	E9	3	4	0	LA,BA	{LAJour BA IV	3
E11	Journalism II	E10	3	4	0	BA	IV	3
E12	Journalism II	E11	3	4	0	BA	IV	3
E13	Effective Speaking		1	2	0	BA	All	4
E14	Effective Speaking	E13	1	2	0	BA	All	4
E15	Survey of English Lit.		3	4	0	LA,BA	Elective	2
E16	Survey of English Lit.		3	4	0	LA,BA	Elective	2
E17	English Drama before Shakespeare		2	3	0	LA	English	3
E18	Chaucer		2	3	0	LA	English	3
E19	Shakespeare		2	3	0	LA,BA	Elective	
E20	Shakespeare		2	3	0	LA,BA	Elective	
E21	19th Cent. Poetry I		2	3	0	LA	Elective	
E22	19th Cent. Poetry II		2	3	0	LA	Elective	
E23	17th & 18th Cent. Prose		2	3	0	LA	Elective	
E24	19th Cent. Prose		2	3	0	LA	Elective	
E25	Am. Lit. to 1860		2	3	0	LA,BA	Elective	
E26	Am. Lit. after 1860		2	3	0	LA,BA	Elective	
E27	Hist. of English Novel		2	3	0	LA	Elective	
E28	Hist. of English Novel		2	3	0	LA	Elective	
E29	Great European Writers		2	3	0	LA	Elective	
E30	Great European Writers		2	3	0	LA	Elective	
E31	Comparative Drama		2	3	0	LA	Elective	
E32	Comparative Drama		2	3	0	LA	Elective	
E33	Modern Lit. 1895-1915		2	3	0	LA	Elective	

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>English — Continued</i>								
E34	Post-War Literature		2	3	0	LA	Elective	
E50	Shakespeare		2	3	0	Eng	Elective	
E51	Short Story		2	3	0	Eng,BA	Elective	
E52	American Novel		2	3	0	Eng,BA	Elective	
E61	Seminar		2	3	0	LA	Elective	
E62	Seminar	E61	2	3	0	LA	Elective	
<i>Economics</i>								
Ec1	Economic Geography		4	4	0	BA	All	1
Ec2	Com. & Ind. Hist. of U. S.		4	4	0	BA	All	1
Ec3	Economic Principles		2	3	0	{BA LA	AllBA Econ & Soc	2 2
Ec4	Economic Principles	Ec3	2	3	0	Same as Ec3		
Ec5	Economic Problems	Ec3	2	3	0	{BA LA	All Econ & Soc	3 3
Ec6	Economic Problems	Ec5	2	3	0	Same as Ec5		
Ec7	Money and Banking	Ec3,4	2	3	0	LA	Elective	
Ec8	Business Cycles	Ec6	2	3	0	LA,BA	Elective	
Ec9	Statistics in Business		2	3	0	BA	All	4
Ec10	Statistics in Business		2	3	0	BA	All	4
Ec11	Labor Problems	Ec3,4	3	4	0	LA,BA	Elective	
Ec12	Economic Systems	Ec3,4	2	3	0	LA,BA	Elective	
Ec14	Inter. Ec. Relations	Ec6	3	4	0	LA,BA	Elective	
Ec15	Hist. of Econ. Thought	Ec6	2	3	0	LA,BA	Elective	
Ec16	Adv. Econ. Theory	Ec15	2	3	0	LA,BA	Elective	
Ec17	Statistics		2	3	0	LA	Elective	
Ec18	Statistics	Ec17	2	3	0	LA	Elective	
Ec21	Economics		2	3	0	Eng	All	3
Ec22	Economics	Ec21	2	3	0	Eng	All	3
Ec61	Seminar		2	3	0	LA	Elective	
Ec62	Seminar	Ec61	2	3	0	LA	Elective	
Ec65	Thesis		3			LA	Elective	
Ec66	Thesis		3			LA	Elective	
<i>Education</i>								
Ed1	History of Education		2	3	0	LA	Elective	
Ed2	History of Education		2	3	0	LA	Elective	
Ed3	Educ. Measurements		2	3	0	LA	Elective	
Ed4	Educ. Org. and Adm.		2	3	0	LA	Elective	
Ed7	Comparative Education		2	3	0	LA	Elective	
Ed9	Educ. Sociology		2	3	0	LA	Elective	
Ed10	Educ. Philosophy		2	3	0	LA	Elective	
Ed11	Principles of Secondary Education		2	3	0	LA	Elective	
Ed12	Methods of Teaching in Secondary Schools		2	3	0	LA	Elective	
<i>Electrical Engineering</i>								
EL1	Electrical Eng. I	P2	1	2	0	Eng	III	2
EL2	Electrical Eng. I	EL1	1	2	0	Eng	III	2
EL5	Electrical Machinery	P2	4	4	4	Eng	I,II,V	2
EL6	Electrical Measurements	EL5	2½	3	3	Eng	II,V	3
EL9	Electrical Eng. II	P2	1½	3	0	Eng	III	3
EL10	Electrical Eng. II	M7	2	3	0	Eng	III	3
EL11	Electrical Eng. Lab.	EL2	1	0	3	Eng	III	3
EL12	Electrical Eng. Lab.	EL10	1	0	3	Eng	III	3
EL13	Elec. Measurements I		2½	4	0	Eng	III	3



No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Electrical Engineering — Continued</i>								
EL14	Elec. Measurements II		2	3	0	Eng	III	3
EL17	Electrical Eng. III	EL10,M6	2	3	0	Eng	III	4
EL18	Electrical Eng. III		2	3	0	Eng	III	4
EL19	Electrical Testing Lab.	EL17	2	2	3	Eng	III	4
EL20	Electrical Testing Lab.	EL18,19	2	2	3	Eng	III	4
EL21	Electrophysics	M7	1	2	0	Eng	III	4
EL22	Electrophysics	EL21	2	3	0	Eng	III	4
EL23	Elec. Measurements Lab.		2	0	3	Eng	III	4
EL24	Adv. Measurements Lab.		2	0	3	Eng	III	4
EL25	Electrical Eng. IV	EL18	3	4	0	Eng	III	5
EL26	Electrical Eng. IV	EL25	3	4	0	Eng	III	5
EL27	Adv. Elec. Eng. Lab.	EL25	2	2	3	Eng	III	5
EL28	Adv. Elec. Eng. Lab.	EL26	2	2	3	Eng	III	5
EL29	Electrical Eng. V-A	EL22	2½	3	0	Eng	III	5
EL30	Electrical Eng. V-A	EL29	2½	3	0	Eng	III	5
EL31	Electrical Eng. V-B		2½	3	0	Eng	III	5
EL32	Electrical Eng. V-B	EL31	2½	3	0	Eng	III	5
EL33	Advanced Experimental Investigations		2	0	3	Eng	III	5
EL34	Advanced Experimental Investigations	EL33	2	0	3	Eng	III	5

*French*

F1	Elementary French		3	5	0	LA	Elective	
F2	Elementary French	F1	3	5	0	LA	Elective	
F3	Intermediate French	F2	3	†	0	LA,BA	Elective	
F4	Intermediate French	F3	3	†	0	LA,BA	Elective	
F5	Advanced French	F4	3	†	0	LA	Elective	
F6	Advanced French	F5	3	†	0	LA	Elective	
F7	French Classicism	F6	2	3	0	LA	Elective	
F8	French Classicism	F7	2	3	0	LA	Elective	
F9	French Romanticism	F6	2	3	0	LA	Elective	
F10	French Romanticism	F9	2	3	0	LA	Elective	

*Banking and Finance*

FI3	Business Finance		3	4	0	BA	All	2
FI4	Business Finance		3	4	0	BA	All	2
FI5	Corporation Finance		2	3	0	BA	All	3
FI6	Banking and Business		2	3	0	BA	All	3
FI8	Adv. Banking Problems		3	4	0	BA	II	4
FI9	Investments		3	4	0	BA	II	4
FI10	Investments		3	4	0	BA	II	4
FI12	Public Finance		2	3	0	BA	All	5
FI13	Real Estate Practice and Appraising		3½	4	0	BA	II	5
FI14	Insurance Principles and Practice		3½	4	0	BA	II	5

*German*

G1	Elementary German		3	†	0	LA	Elective	
G2	Elementary German	G1	3	†	0	LA	Elective	
G3	Intermediate German	G2	3	4	0	LA	Elective	
G4	Intermediate German	G3	3	4	0	LA	Elective	
G5	Advanced German	G4	3	4	0	LA	Elective	

†NOTE: LA Elective for first year has 3 class hours; LA Elective, Upperclass, has 4 class hours; BA Elective in fourth year has 4 class hours.

†NOTE: LA Elective for first year has 3 class hours; LA Elective, Upperclass, has 5 class hours.

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>German — Continued</i>								
G6	Advanced German	G5	3	4	0	LA	Elective	
G7	Class. Per. of Ger. Lit.	G6	2	3	0	LA	Elective	
G8	Class. Per. of Ger. Lit.	G7	2	3	0	LA	Elective	
G9	Ger. Lit. of 19th Cent.	G6	2	3	0	LA	Elective	
G10	Ger. Lit. of 19th Cent.	G9	2	3	0	LA	Elective	
<i>Art</i>								
GA51	History of Art I		2	3	0	Eng	Elective	
GA52	History of Art II		2	3	0	Eng	Elective	
<i>Government</i>								
Gv1	Am. Govt. and Politics		3	3	0	{BA LA	All SocSci	1 1
Gv2	Am. Govt. and Politics		3	3	0	{BA LA	All SocSci	1 1
Gv3	Comparative Govt.		2	3	0	{LA BA	Soc & Econ Elective	3 3
Gv4	Comparative Govt.		2	3	0	{LA BA	Soc & Econ Elective	3 3
Gv5	Am. Const. Law		2	3	0	LA,BA	Elective	
Gv5-B	Constitutional Law		3	4	0	BA	V	4
Gv6	Am. Const. Law	Gv5	2	3	0	LA,BA	Elective	
Gv7	Origins of Political Theory		2	3	0	LA,BA	Elective	
Gv8	Modern Political Theory		2	3	0	LA,BA	Elective	
Gv51	Am. Const. Law		2	3	0	Eng	Elective	
<i>Geology</i>								
Gy1	General Geology		2	3	0	Eng	I	4
Gy2	General Geology	Gy1	2	3	0	Eng	I	4
Gy5	Historical Geology	Gy2	2	3	0	LA	Elective	
Gy6	Historical Geology	Gy5	2	3	0	LA	Elective	
Gy50	Geology		2	3	0	Eng,BA	Elective	
<i>History</i>								
H1	Hist. of Civilization		4	4	0	LA	SocSci	1
H2	Hist. of Civilization		4	4	0	LA	SocSci	1
H5	Europe 1789-1870		2	3	0	LA,BA	Elective	
H6	Europe 1870-1938		2	3	0	LA,BA	Elective	
H7	England to 1688		2	3	0	LA	English	3
H8	England since 1688		2	3	0	LA	English	3
H9	U. S. to 1865		2	3	0	LA,BA	Elective	
H10	U. S. since 1865		2	3	0	LA,BA	Elective	
H11	Latin Am. History		2	3	0	LA	Elective	
H12	Latin Am. History		2	3	0	LA	Elective	
H13	English Const. History		3	4	0	LA	Elective	
H14	American Const. History		3	4	0	LA	Elective	
<i>Industrial Administration</i>								
IA1	Industrial Mgt. I		2	3	0	BA	All	3
IA2	Industrial Mgt. II		2	3	0	BA	All	3
IA3	Personnel Administration		3	4	0	BA	IV	4
IA4	Personnel Problems		3	4	0	BA	IV	4
IA5	Motion and Time Study		3½	4	0	BA	IV	5
IA14	Industrial Finance		3½	4	0	BA	IV	5
<i>Industrial Engineering</i>								
IN3	Prod. Processes I		2½	4	0	Eng	II,III,V	2
IN4	Prod. Processes II		1½	2	0	Eng	II,III,V	2

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Industrial Engineering — Continued</i>								
IN5	Industrial Mgt. I		2	3	0	{Eng Eng	II,V I,IV	4 5
IN6	Industrial Mgt. II	IN5	2	3	0	Same as IN5		
IN7	Industrial Accounting		2	1	4	Eng	V	4
IN8	Industrial Accounting	IN7	2	1	4	Eng	V	4
IN9	Cost Accounting	IN8	2½	2	2	Eng	V	5
IN10	Cost Accounting	IN9	2½	2	2	Eng	V	5
IN11	Methods Engineering	IN6	2½	2	2	Eng	V	5
IN14	Industrial Finance		2½	3	0	Eng	V	5
IN15	Sales Engineering		2½	3	0	Eng	V	5
IN16	Personnel Administration		2	3	0	Eng	II,V	5
IN18	Sales Eng. Problems		2½	3	0	Eng	V	5
IN21	Contracts		2	3	0	Eng	II,V	5
IN23	Industrial Statistics		2½	2	2	Eng	V	4
IN24	Industrial Statistics		2½	2	2	Eng	V	4
IN25	Industrial Plants	ME23,30	2½	6	0	Eng	V	5
IN26	Industrial Plants	IN25	2½	6	0	Eng	V	5
<i>Business Law</i>								
L1	Legal Bases of Business		3	3	0	BA	All	1
L2	Business Associations		4	4	0	BA	All	1
L5	Legal Aspects I		2	3	0	BA	All	5
L6	Legal Aspects II		2	3	0	BA	All	5
<i>Mathematics</i>								
M1	College Algebra		3	3	0	{Eng LA	All App & Pure Sci	1 1
M3	Trigonometry		2	2	0	Same as M1		
M4	Analytic Geometry and Intro. to Calculus	M1,3	5	5	0	Same as M1		
M5	Differential Calculus	M1,4	3	4	0	{Eng LA	All Math&Phys, Chem	2 2
M6	Integral Calculus	M5	3	4	0	Same as M5		
M7	Differential Equations I	M6	2½	4	0	{Eng LA	III,IV Math&Phys	3 3
M8	Differential Equations II	M6,7	3	4	0	LA	Math&Phys	
M9	Higher Algebra	M1,4	3	4	0	LA	Elective	
M10	Curve Analysis	M5	3	4	0	LA	Elective	
M11	Solid Anal. Geom.	M4	3	4	0	LA	Elective	
M12	Modern Geometry	M4	3	4	0	LA	Elective	
M13	Spherical Trig.	M3	3	4	0	LA	Elective	
M14	Hist. of Math.		2	3	0	LA	Elective	
M15	Advanced Calculus	M6	3	4	0	LA	Elective	
M16	Advanced Calculus	M15	3	4	0	LA	Elective	
M17	Series	M6	3	4	0	LA	Math&Phys	3
M18	Theory of Equations	M5	3	4	0	LA	Math&Phys	3
<i>Marketing and Advertising</i>								
MA1	Marketing Principles		3	4	0	BA	All	3
MA2	Marketing Problems		3	4	0	BA	All	3
MA3	Sales Management		3	4	0	BA	III	4
MA4	Sales Management		3	4	0	BA	III	4
MA5	Advertising Principles		3	4	0	BA	III,VI	4
MA6	Advertising Problems		3	4	0	BA	III,VI	4
MA7	Retail Store Mgt.		3½	4	0	BA	III	5
MA8	Retail Merchandising		3½	4	0	BA	III	5

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Mechanical Engineering</i>								
ME1	Mechanism		3	6	0	Eng	II & V	3
ME15	Industrial Plants	ME23,32	2½	6	0	Eng	II-Elective	5
ME16	Industrial Plants	ME15	2½	6	0	Eng	II-Elective	5
ME20	Applied Mech. (Statics)	P1	3	4	0	Eng	All	2
ME21	Applied Mech. (Kinetics)	ME20	3	4	0	Eng	All	3
ME22	Strength of Materials	ME20,21,P4	3	4	0	Eng	All	3
ME23	Strength of Materials	ME22	2	3	0	Eng	I,II,V	4
ME24	Advanced Mechanics	ME23	2	3	0	Eng	I,II	4
ME27	Metallography	IN3	2	3	0	Eng	II	4
ME29	Heat Eng. (Power Pl't Eq.)		2	3	0	Eng	II & V	3
ME30	Heat Eng. (Thermo.)	P4	3	4	0	Eng	II,IV,V	3
ME31	Heat Engineering	ME30,29	2½	4	0	Eng	II	4
ME32	Heat Engineering	ME31	2½	4	0	Eng	II	4
ME33	Refrigeration	ME32	2	3	0	Eng	II-Elective	5
ME34	Steam Turbines	ME31	2	3	0	Eng	II-Elective	5
ME35	Heat Engineering	P4	2	3	0	Eng	I	3
ME36	Heat Engineering	ME35	2½	2	3	Eng	III	4
ME37	Diesel Engines	ME32	2	3	0	Eng	II-Elective	5
ME38	Diesel Lab.	ME37	2	1	3	Eng	II-Elective	5
ME39	Engine Dynamics	ME21	2½	4	0	Eng	II-Elective	5
ME40	Aerodynamics	ME21,CII2	2	3	0	Eng	II-Elective	4
ME42	Heating and Air Conditioning	ME21,CII2	2	3	0	Eng	II-Elective, V	4
ME44	Power Plant Eng.	ME32	2½	4	0	Eng	II	5
ME45	Air Cond. Design	ME42	2½	6	0	Eng	II-Elective	5
ME46	Air Cond. Design	ME45	2½	6	0	Eng	II-Elective	5
ME48	Air Cond. Lab.	ME45	2	1	3	Eng	II-Elective	5
ME51	Machine Design	ME24	3	6	0	Eng	II	5
ME52	Machine Design	ME51	3	6	0	Eng	II	5
ME54	Diesel Eng. Design	ME39	2½	6	0	Eng	II-Elective	5
ME61	Mechanical Eng. Lab.	ME29,31	2	0	4	Eng	II & V	4
ME62	Mechanical Eng. Lab.	ME32,61	2	0	4	Eng	II & V	4
ME63	Mechanical Eng. Lab.	ME32,62	2½	1	3	Eng	II	5
ME69	Testing Materials Lab.	ME22	1½	1	3	Eng	I & III	4
ME70	Testing Materials Lab.	ME69	1½	1	3	Eng	I	4
ME73	Aircraft Structures	ME23	2	3	0	Eng	II-Elective	5
ME74	Aeronautical Lab.	ME40	2	1	3	Eng	II-Elective	5
ME76	Aircraft Eng. Design	ME39	2½	6	0	Eng	II-Elective	5

### Physics

P1-A	Survey of Physical Sciences		4	4	0	{ LA BA	Soc Sci Elective All	1 1
P2-A	Survey of Physical Sciences		4	4	0	Same as P1-A		
P1	Physics I		3	3	0	{ Eng LA	All App & Pure Sci	1 1
P2	Physics I		3	3	0	Same as P1		
P3	Physics II	P1,2	2	3	0	{ Eng LA	All Math&Phys, Chem	2 2
P4	Physics II	P1,2	2	3	0	{ Eng LA	All Math&Phys, Chem	2 2



No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Physics — Continued</i>								
P5	Physics Laboratory	P1,2	1	0	2	{ Eng LA	I,II,IV,V Math&Phys, Chem	2 2
P6	Physics Laboratory	P1,2	1	0	2	{ Eng LA	I,II,IV,V Math&Phys, Chem	2 2
P7	Physics Laboratory	P1,2	2	4	0	Eng	III	2
P8	Physics Laboratory	P1,2	2	4	0	Eng	III	2
P9	Optics	P3,M6	3	3	2	LA	Math&Phys	3
P10	Optics	P9	3	3	2	LA	Math&Phys	3
P13	Acoustics	P3,M6	3	3	2	LA	Elective	
P14	Acoustics	P13	3	3	2	LA	Elective	
P15	Modern Physics	P4,M7	3	3	2	LA	Elective	
P16	Modern Physics	P15	3	3	2	LA	Elective	
P65	Thesis		3			LA	Elective	
P66	Thesis		3			LA	Elective	
P101	Theoretical Physics		3			LA	Graduate	
P102	Theoretical Physics		3			LA	Graduate	
P103	Quantum Mechanics		3			LA	Graduate	
P104	Quantum Mechanics		3			LA	Graduate	
P105	Applied Mathematics		3			LA	Graduate	
P106	Applied Mathematics		3			LA	Graduate	
P107	Graduate Thesis		2-4			LA	Graduate	
P108	Graduate Thesis		2-4			LA	Graduate	
P109	Graduate Thesis		2-4			LA	Graduate	
P110	Graduate Thesis		2-4			LA	Graduate	
<i>Public Administration</i>								
PA2	Public Administration I		3	4	0	BA	V	4
PA4	Political Concepts		3	4	0	BA	V	4
PA5	Bus. and Govt.		2	3	0	BA	All	5
PA7	Public Administration II		3	4	0	BA	V	5
PA8	Public Administration III		3	4	0	BA	V	5
<i>Physical Education</i>								
PE1	Hygiene		1	1	0	All	All	1
PE5	Prin. of Phys. Ed.		2	3	0	LA	Elective	
PE6	Play and Recreation		2	3	0	LA	Elective	
PE7	Hist. of Phys. Ed.		2	3	0	LA	Elective	
PE8	Admin. of Phys. Ed.		2	3	0	LA	Elective	
PE9	Football		2	3	0	LA	Elective	
PE11	Track and Field Events		2	3	0	LA	Elective	
PE12	Basketball and Baseball		2	3	0	LA	Elective	
<i>Philosophy</i>								
Ph1	Intro. to Philosophy		2	3	0	LA	Elective	
Ph2	Problems of Philosophy		2	3	0	LA	Elective	
Ph3	History of Philosophy		2	3	0	LA	Elective	
Ph4	History of Philosophy		2	3	0	LA	Elective	
Ph5	Philosophy of Religion		2	3	0	LA	Elective	
Ph6	Logic		2	3	0	LA	Elective	
Ph50	Philosophy		2	3	0	Eng,BA	Elective	
<i>Psychology</i>								
Ps1	Intro. to Diff. Psych.		2	3	0	LA	{ Engl,SS, Biol,M&P	2
Ps2	General Psychology	Ps1	2	3	0	LA	{ Engl,SS, Biol,M&P	2
Ps1-B	Psychology		2	3	0	BA	All	2

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<b>Psychology — Continued</b>								
Ps2-B	Psychology		2	3	0	BA	All	2
Ps3	Experimental Psychology	Ps2	3	4	0	LA	Elective	
Ps4	Differential Psychology	Ps3	3	4	0	LA	Elective	
Ps5	Educ. Psychology	Ps2	2	3	0	LA	Elective	
Ps6	Educ. Psychology	Ps5	2	3	0	LA	Elective	
Ps7	Soc. Psych. of Everyday Life	Ps2	2	3	0	LA,BA	Elective	
Ps8	Soc. Psych. Theory and Methods	Ps7	2	3	0	LA,BA	Elective	
Ps9	Psych. of Personality	Ps2	2	3	0	LA	Elective	
Ps10	Abnormal Psychology	Ps9	2	3	0	LA	Elective	
Ps11	Applied Psychology	Ps9	2	3	0	LA	Elective	
Ps13	Psychological Testing	Ps4	2	3	0	LA	Elective	
Ps14	Advanced Experimental Laboratory	Ps3	2	3	0	LA	Elective	
Ps50	General Psychology		2	3	0	Eng	Elective	
Ps61	Seminar							
Ps62	Seminar	Ps61	2	3	0	LA	Elective	
<b>Sociology</b>								
S1	Intro. to Sociology		2	3	0	{ Eng BA LA	All Elective Engl & Soc Sci	4 3 2
S2	Principles of Sociology		2	3	0	Same as S1		
S3	Social Problems	S1,2	2	3	0	LA,BA	Elective	
S4	Social Pathology	S1,2	2	3	0	LA,BA	Elective	
S5	Criminology	S1,2	2	3	0	LA	Elective	
S6	Penology	S5	2	3	0	LA	Elective	
S7	Prin. of Social Ethics	S1,2	2	3	0	LA,BA	Elective	
S8	Probs. in Social Ethics	S7	2	3	0	LA,BA	Elective	
S9	The Family	S1,2	2	3	0	LA	Elective	
S10	The Family	S9	2	3	0	LA	Elective	
S11	Social Control	S3,4,Ph2	2	3	0	LA,BA	Elective	
S12	Social Progress	S11	2	3	0	LA,BA	Elective	
S13	Population Problems	S1,2	2	3	0	LA	Elective	
S14	Urban Sociology	S1,2	2	3	0	LA,BA	Elective	
S15	History of Sociological Thought	S3,4,Ph2	2	3	0	LA	Elective	
S16	Sociology of Religion	S3,4	2	3	0	LA	Elective	
S50	The Family		2	3	0	Eng,BA	Elective	
S61	Seminar		2	3	0	LA	Elective	
S62	Seminar	S61	2	3	0	LA	Elective	
S65	Thesis		3			LA	Elective	
S66	Thesis		3			LA	Elective	
<b>Spanish</b>								
Sp1	Elementary Spanish		3	5	0	LA	Elective	
Sp2	Elementary Spanish	Sp1	3	5	0	LA	Elective	
Sp3	Intermediate Spanish	Sp2	3	4	0	LA	Elective	
Sp4	Intermediate Spanish	Sp3	3	4	0	LA	Elective	
<b>Unclassified</b>								
U4	Business Policy		2	3	0	BA	All	5
U50	Contracts		2	3	0	Eng	Elective	
	Orientation		0	1	0	All	All	1
	Physical Training		0	2	0	All	All	1
	Thesis (see page 132.)							

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OFFICE HOURS  
DEPARTMENT OF ADMISSIONS  
9 A.M. to 4 P.M. daily  
Saturday 12.00 N'N  
Wednesday Evenings by  
Appointment

Northeastern University

College of Liberal Arts

Paste a Small  
Photo or  
Snapshot  
in This Space

APPLICATION FOR ADMISSION

(A non-returnable fee of five dollars must accompany this application. Make checks, money orders, or drafts payable to Northeastern University)

Boston, Mass.....19

To Director of Admissions:

I (Please print name in full) .....

hereby respectfully apply for admission to the College of Liberal Arts to major in the field checked:

- |                                      |   |
|--------------------------------------|---|
| <input type="checkbox"/> Biology     | <input type="checkbox"/> Economics          |
| <input type="checkbox"/> Chemistry   | <input type="checkbox"/> English            |
| <input type="checkbox"/> Mathematics | <input type="checkbox"/> English—Journalism |
| <input type="checkbox"/> Physics     | <input type="checkbox"/> Psychology         |
| <input type="checkbox"/> Pre-Dental  | <input type="checkbox"/> Sociology          |
| <input type="checkbox"/> Pre-Medical | <input type="checkbox"/> Pre-Legal          |

for the school period beginning ..... 19....

NOTE: The applicant should fill out the following form (both sides) with care.

Residence.....Street  
Town or City.....  
State.....Tel.....  
Date of Birth.....Age.....  
Place of Birth.....  
Race.....Religion.....Nationality.....  
Graduate of.....High School, Year.....  
Location of High School.....  
Name of Principal.....  
Other high schools you have attended.....  
Names of Principals.....  
If not a graduate, state the years of attendance and why you left.....  
.....  
Father's, Mother's, or Guardian's Name.....  
.....  
Address.....  
Father's work, business or profession.....  
Names and addresses of two other persons, to whom we may direct inquiries concerning you.  
.....  
.....

Weight.....Height.....

Have you any physical infirmities? Explain, if any.....

.....

.....

.....

.....

Defects of speech.....

Defects of hearing.....

Defects of sight.....

Bodily infirmities.....

Is your general health good, fair, or poor?.....

Have you done collegiate work elsewhere?.....

If so, name and address of college or university.....

.....

.....

Name of person who will furnish transcript of your college record.....

.....

.....

Do you expect advance credit for past collegiate work?.....

.....

List all athletics and other extra curricula high school activities you

have engaged in.....

.....

.....

.....

Names and addresses of all past employers with brief description of

each job, length of employment, and wages received.....

.....

.....

.....

.....

.....

.....

Declaration of Parent or Guardian

This application has been read by me and has my approval.

.....

Signature of Parent or Guardian



Date . . . . .

Milton J. Schlagenhauf, *Director of Admissions*  
Northeastern University  
360 Huntington Avenue  
Boston, Mass.

Dear Sir:

Please send me additional information on the following points:

. . . . .

. . . . .

. . . . .

. . . . .

. . . . .

. . . . .

. . . . .

. . . . .

Name . . . . .

Street and Number . . . . .

Town or City . . . . .

State . . . . .



# NORTHEASTERN UNIVERSITY

## COLLEGE OF LIBERAL ARTS

Offers a broad program of college subjects serving as a foundation for the understanding of modern culture, social relations, and technical achievement. Varied opportunities available for vocational specialization. Degree: Bachelor of Science or Bachelor of Arts.

## COLLEGE OF ENGINEERING

Offers curricula in Civil, Mechanical (with Air-Conditioning and Aeronautical options), Electrical, Chemical, and Industrial Engineering. Class room study is supplemented by experiment and research in well-equipped laboratories. Degree: Bachelor of Science in the professional field of specialization.

## COLLEGE OF BUSINESS ADMINISTRATION

Offers six curricula: Accounting, Banking and Finance, Marketing and Advertising, Industrial Administration, Journalism, and Public Administration. Each curriculum represents in itself a broad survey of business technique, differing from the others chiefly in emphasis. Degree: Bachelor of Science in Business Administration.

---

## SCHOOL OF LAW

Offers day and evening undergraduate programs admitting those who present a minimum of two years of college work, each program leading to the degree of Bachelor of Laws. Also graduate program in the evening leading to the degree of Master of Laws. Co-educational.

## SCHOOL OF BUSINESS

Offers curricula through evening classes leading to the degree of Bachelor of Business Administration with appropriate specification in Accounting, Management (with Industrial and Merchandising options), and Engineering and Business or the degree of Bachelor of Commercial Science in Law and Business Management. Preparation for C.P.A. examinations. Shorter programs arranged to meet special needs. Co-educational.

## EVENING COURSES OF THE COLLEGE OF LIBERAL ARTS

Certain courses of the College of Liberal Arts are offered during evening hours, affording concentration in Economics, English, History and Government, or Social Science. A special program preparing for admission to the School of Law is also available. The program is equivalent in hours to one-half the requirement for the A.B. or S.B. degree. Associate in Arts title conferred. Co-educational.

---

The Colleges of Liberal Arts, Engineering, and Business Administration offer day programs for men only and are conducted on the co-operative plan. After the freshman year, students may alternate their periods of study with periods of work in the employ of business or industrial concerns at ten-week intervals. Under this plan they gain valuable experience and earn a large part of their college expenses.

---

In addition to the above schools the University has affiliated with it and conducts: the Lincoln Technical Institute offering, through evening classes, courses of college grade in various fields of engineering leading to the title of Associate in Engineering; and the Lincoln Preparatory School, an accredited evening school preparing for college entrance and offering other standard high school programs.

---

For further information regarding any of the above schools, address

NORTHEASTERN UNIVERSITY

Law School

Other Schools

47 Mt. Vernon Street

360 Huntington Avenue

Boston, Massachusetts

Telephone: KENmore 5800





# Northeastern University

COLLEGE OF  
**ENGINEERING**  
CATALOGUE  
1942-1943



BOSTON, MASSACHUSETTS

January, 1942

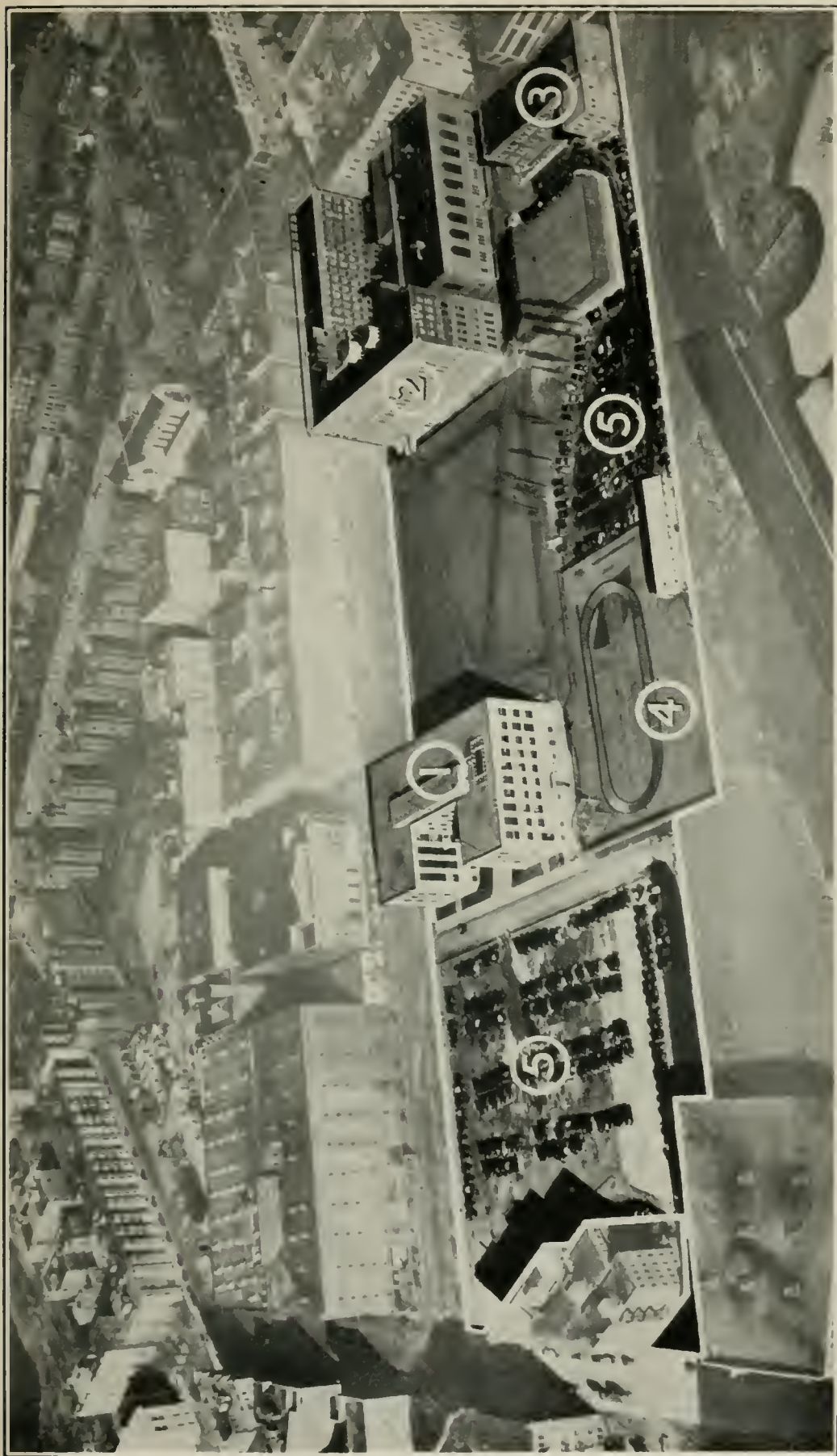
## GIFTS AND BEQUESTS

Northeastern University will welcome gifts and bequests for the following purposes:

- (a) For its building program
- (b) For general endowment
- (c) For specific purposes which may especially appeal to the donor.

It is suggested that, when possible, those contemplating gifts or bequests confer with the President of the University regarding the University's needs before legal papers are drawn.

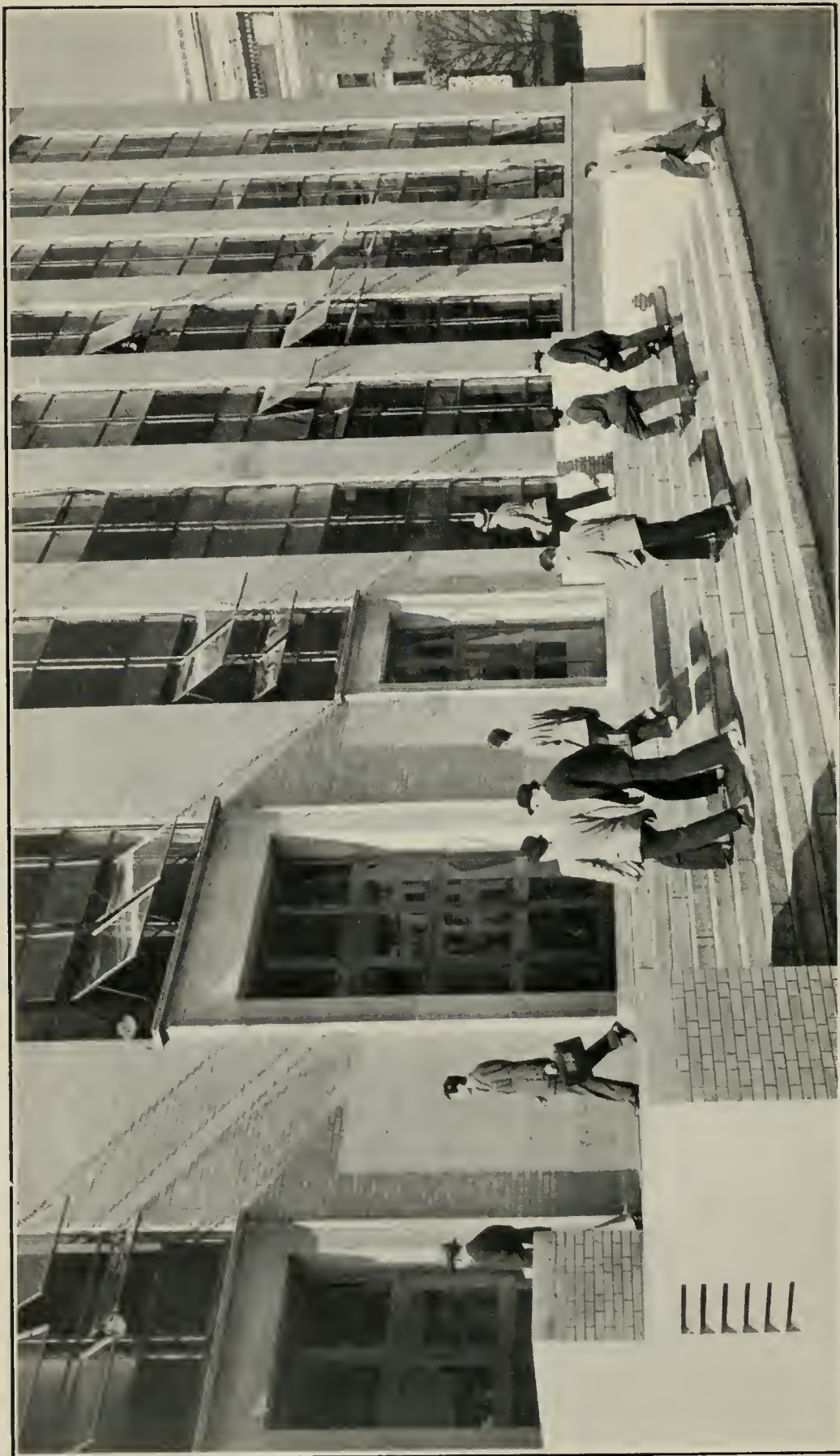
Gifts and bequests should be made only in the University's legal name, which is "Northeastern University".



## NORTHEASTERN UNIVERSITY

1. Richards Hall
2. East Building
3. South Building
4. Outdoor Gymnasium
5. University Parking Areas





RICHARDS HALL



# NORTHEASTERN UNIVERSITY

## *College of Engineering*

*Conducted on the Co-operative Plan*

### *Catalogue*

1942-1943

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# Freshman Calendar, 1942-1943

## SEPTEMBER

S	M	T	W	T	F	S
		①	②	③	④	⑤
⑥	⑦	⑧	⑨	10	11	12
⑬	14	15	16	17	18	19
⑳	21	22	23	24	25	26
㉓	28	29	30			

## OCTOBER

S	M	T	W	T	F	S
				1	2	3
④	5	6	7	8	9	10
⑪	⑫	13	14	15	16	17
⑱	19	20	21	22	23	24
㉒	26	27	28	29	30	31

## NOVEMBER

S	M	T	W	T	F	S
①	2	3	4	5	6	7
⑧	9	10	11	12	13	14
⑱	16	17	18	19	20	21
㉒	23	24	25	㉒	27	28
㉓	30					

## DECEMBER

S	M	T	W	T	F	S
		1	2	3	4	5
⑥	7	8	9	10	11	12
⑬	14	15	16	17	18	19
⑳	㉑	㉒	㉓	㉔	㉕	㉖
㉗	㉘	㉙	㉚	㉛		

## JANUARY

S	M	T	W	T	F	S
					①	②
③	4	5	6	7	8	9
⑩	11	12	13	14	15	16
⑰	18	19	20	21	22	23
㉒	25	26	27	28	29	30
㉓						

## FEBRUARY

S	M	T	W	T	F	S
	1	2	3	4	5	6
⑦	8	9	10	11	12	13
⑭	15	16	17	18	19	20
㉑	㉒	23	24	25	26	27
㉓						

## MARCH

S	M	T	W	T	F	S
	1	2	3	4	5	6
⑦	8	9	10	11	12	13
⑭	15	16	17	18	19	20
㉑	22	23	24	25	26	27
㉓	29	30	31			

## APRIL

S	M	T	W	T	F	S
				1	2	3
④	5	6	7	8	9	10
⑪	12	13	14	15	16	17
⑱	⑱	20	21	22	23	24
㉒	26	27	28	29	30	

## MAY

S	M	T	W	T	F	S
						1
②	3	4	5	6	7	8
⑨	10	11	12	13	14	15
⑱	17	18	19	20	21	22
㉒	24	25	26	27	28	29
㉓	㉔					

## JUNE

S	M	T	W	T	F	S
		①	②	③	④	⑤
⑥	⑦	⑧	⑨	⑩	⑪	⑫
⑬	⑭	⑮	⑯	⑰	⑱	⑲
㉒	㉑	㉒	㉓	㉔	㉕	㉖
㉗	㉘	㉙	㉚			

## JULY

S	M	T	W	T	F	S
				①	②	③
④	⑤	⑥	⑦	⑧	⑨	⑩
⑪	⑫	⑬	⑭	⑮	⑯	⑰
⑱	⑲	㉒	㉑	㉒	㉑	㉒
㉓	㉔	㉕	㉖	㉗	㉘	㉙

## AUGUST

S	M	T	W	T	F	S
①	②	③	④	⑤	⑥	⑦
⑧	⑨	⑩	⑪	⑫	⑬	⑭
⑮	⑯	⑰	⑱	⑲	㉒	㉑
㉒	㉑	㉒	㉓	㉔	㉕	㉖
㉗	㉘	㉙				

Days on which college exercises are held are indicated thus: **1 2 3**

Sundays, holidays, and vacations are indicated thus: ① ② ③

# Upperclass Calendar, 1942-1943

## SEPTEMBER

S	M	T	W	T	F	S
		①	②	③	④	⑤
⑥	⑦	⑧	⑨	⑩	⑪	⑫
⑬	14	15	16	17	18	19
⑳	21	22	23	24	25	26
㉑	28	29	30			

## OCTOBER

S	M	T	W	T	F	S
				1	2	3
④	5	6	7	8	9	10
⑪	⑫	13	14	15	16	17
⑱	19	20	21	22	23	24
㉑	26	27	28	29	30	31

## NOVEMBER

S	M	T	W	T	F	S
①	2	3	4	5	6	7
⑧	9	10	11	12	13	14
⑮	16	17	18	19	20	21
㉒	<b>23</b>	<b>24</b>	<b>25</b>	㉔	<b>27</b>	<b>28</b>
㉙	<b>30</b>					

## DECEMBER

S	M	T	W	T	F	S
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
⑥	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
⑬	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>
⑳	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	㉕	㉖
㉗	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>		

## JANUARY

S	M	T	W	T	F	S
					①	②
③	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
⑩	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
⑰	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>
㉒	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>
㉙						

## FEBRUARY

S	M	T	W	T	F	S
	1	2	3	4	5	6
⑦	8	9	10	11	12	13
⑭	15	16	17	18	19	20
⑰	㉒	23	24	25	26	27
㉙						

## MARCH

S	M	T	W	T	F	S
	1	2	3	4	5	6
⑦	8	9	10	11	12	13
⑭	15	16	17	18	19	20
⑰	22	23	24	25	26	27
㉑	29	30	31			

## APRIL

S	M	T	W	T	F	S
				1	2	3
④	5	6	7	8	9	10
⑪	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>
⑱	⑲	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
㉑	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	

## MAY

S	M	T	W	T	F	S
						<b>1</b>
②	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
⑨	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>
⑱	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>
㉑	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>
㉙	⑳					

## JUNE

S	M	T	W	T	F	S
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
⑥	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
⑬	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>
⑳	㉑	㉒	㉓	㉔	㉕	㉖
㉗	㉘	㉙	㉚			

## JULY

S	M	T	W	T	F	S
				①	②	③
④	⑤	⑥	⑦	⑧	⑨	⑩
⑪	⑫	⑬	⑭	⑮	⑯	⑰
⑱	⑲	⑳	㉑	㉒	㉓	㉔
㉕	㉖	㉗	㉘	㉙	㉚	㉛

## AUGUST

S	M	T	W	T	F	S
①	②	③	④	⑤	⑥	⑦
⑧	⑨	⑩	⑪	⑫	⑬	⑭
⑮	⑯	⑰	⑱	⑲	⑳	㉑
㉒	㉓	㉔	㉕	㉖	㉗	㉘
㉙	㉚	㉛				

Days on which Division A students are in college are indicated thus: 1 2 3

Days on which Division B students are in college are indicated thus: **1 2 3**

Sundays, holidays, and summer periods are indicated thus: ① ② ③

## *Calendar for the College Year, 1942-1943*

1942

- SEPTEMBER 2 *Wednesday.* Entrance condition examinations.
- SEPTEMBER 7 *Monday.* Labor Day. (College exercises omitted.)
- SEPTEMBER 10 *Thursday.* Registration and opening of college for freshmen. Students failing to register promptly on September 10 will be charged a late registration fee of five dollars (\$5.00).
- SEPTEMBER 14 *Monday.* Opening of college for Division A upperclassmen. Co-operative work period begins for Division B upperclassmen.
- OCTOBER 12 *Monday.* Columbus Day. (College exercises omitted.)
- NOVEMBER 23 *Monday.* Opening of college for Division B upperclassmen. Co-operative work period begins for Division A upperclassmen.
- NOVEMBER 25 *Wednesday.* College exercises omitted after 1:00 p.m.
- NOVEMBER 26 *Thursday.* Thanksgiving Day. (College exercises omitted.)
- DECEMBER 21 }  
JANUARY 2 } Vacation for freshmen.
- DECEMBER 24 *Thursday.* College exercises omitted after 1:00 p.m.
- DECEMBER 25 } *Friday and Saturday.* Celebration of Christmas.  
DECEMBER 26 } (College exercises omitted.)



1943

JANUARY 1 } *Friday and Saturday.* Celebration of New Year's  
JANUARY 2 } *Day.* (College exercises omitted.)

FEBRUARY 1 *Monday.* Second semester begins for freshmen and Division A upperclassmen. Co-operative work period begins for Division B upperclassmen.

FEBRUARY 22 *Monday.* Washington's Birthday. (College exercises omitted.)

APRIL 10 *Saturday.* College year ends for Division A upperclassmen.

APRIL 12 *Monday.* Second semester begins for Division B upperclassmen. Co-operative work period begins for Division A upperclassmen.

APRIL 19 *Monday.* Patriots' Day. (College exercises omitted.)

MAY 29 *Saturday.* College year ends for freshmen.

MAY 31 *Monday.* Observation of Memorial Day. (College exercises omitted.)

JUNE 19 *Saturday.* College year ends for Division B upperclassmen.

SEPTEMBER 6 *Monday.* Labor Day. (College exercises omitted.)

SEPTEMBER 9 *Thursday.* Registration and opening of college for freshmen. Students failing to register promptly on September 9 will be charged a late registration fee of five dollars (\$5.00).

SEPTEMBER 13 *Monday.* Opening of college year 1943-1944.

# The University Corporation

ROBERT GRAY DODGE  
*Chairman*

FRANK LINCOLN RICHARDSON  
*Vice-Chairman*

CARL STEPHENS ELL  
*President of the University*

GALEN DAVID LIGHT  
*Secretary and Treasurer*

JOSEPH FLORENCE ABBOTT  
CHARLES FRANCIS ADAMS  
WILMAN EDWARD ADAMS  
ROGER AMORY  
HENRY NATHANIEL ANDREWS  
ROBERT BALDWIN  
ARTHUR ATWOOD BALLANTINE  
GEORGE LOUIS BARNES  
THOMAS PRINCE BEAL  
FARWELL GREGG BEMIS  
HENRY GODDARD BRADLEE  
PAUL CODMAN CABOT  
WINTHROP L. CARTER  
WALTER CHANNING  
WILLIAM CONVERSE CHICK  
EVERETT AVERY CHURCHILL  
PAUL FOSTER CLARK  
SEARS B. CONDIT  
ALBERT MORTON CREIGHTON  
ERNEST BLANEY DANE  
WILLIAM JAMES DAVIDSON  
JAMES DEAN  
PAUL AUGUSTUS DRAPER  
CHARLES FRANCIS EATON  
LINDSAY ELLMS  
JOSEPH BUELL ELY  
JOHN WELLS FARLEY  
FREDERIC HAROLD FAY  
ALLAN FORBES  
EDWARD J. FROST  
FRANKLIN WILE GANSE  
HARVEY DOW GIBSON  
MERRILL GRISWOLD  
HENRY INGRAHAM HARRIMAN  
CHANDLER HOVEY  
HOWARD MUNSON HUBBARD  
MAYNARD HUTCHINSON  
ARTHUR STODDARD JOHNSON

HALFDAN LEE  
EDWARD ABBOTT MACMASTER  
JOHN RUSSELL MACOMBER  
JOSEPH PATRICK MANNING  
HAROLD FRANCIS MASON  
JAMES FRANKLIN McELWAIN  
HUGH DEAN McLELLAN  
FRED LESTER MORGAN  
IRVING EDWIN MOULTROP  
CLARENCE LUCIAN NEWTON  
OLAF OLSEN  
AUGUSTIN HAMILTON PARKER, JR.  
GEORGE EDWIN PIERCE  
ROGER PIERCE  
MATTHEW POROSKY  
FREDERICK SANFORD PRATT  
HARRY WENDELL PROUT  
SIDNEY RABINOVITZ  
STUART CRAIG RAND  
JAMES LORIN RICHARDS  
CHARLES MILTON ROGERSON  
ROBERT BILLINGS RUGG  
LEVERETT SALTONSTALL  
FRANK PALMER SPEARE  
RUSSELL HENRY STAFFORD  
FRANCIS ROBERT CARNEGIE STEELE  
CHARLES STETSON  
EARL PLACE STEVENSON  
ROBERT TREAT PAINE STORER  
FRANK HORACE STUART  
EDWARD WATSON SUPPLE  
MAHLON EDWARD TRAYLOR  
BAYARD TUCKERMAN, JR.  
ELIOT WADSWORTH  
EUSTIS WALCOTT  
EDWIN SIBLEY WEBSTER  
SINCLAIR WEEKS

## General University Committees

### *Executive Council*

CARL STEPHENS ELL, *Chairman*

EVERETT AVERY CHURCHILL

GALEN DAVID LIGHT

### *University Cabinet*

CARL STEPHENS ELL, *Chairman*

EVERETT AVERY CHURCHILL  
WILLIAM THOMAS CLONEY, JR.  
CHARLES WILLIAM HAVICE  
ASA SMALLIDGE KNOWLES  
WILFRED STANLEY LAKE  
JAMES WALLACE LEES  
GALEN DAVID LIGHT  
HAROLD WESLEY MELVIN  
WINTHROP ELIOT NIGHTINGALE

EDWARD SNOW PARSONS  
JOHN BUTLER PUGSLEY  
CHARLES HENRY SAMPSON  
MILTON JOHN SCHLAGENHAUF  
SYDNEY KENNETH SKOLFIELD  
EBEN OSWELL SMITH  
J. KENNETH STEVENSON  
WILLIAM CROMBIE WHITE  
RUSSELL WHITNEY

FRANK GIVEN AVERILL, *Secretary*

### *Administrative Committee*

EVERETT AVERY CHURCHILL, *Chairman*

FRANK GIVEN AVERILL  
GALEN DAVID LIGHT

MILTON JOHN SCHLAGENHAUF  
WILLIAM CROMBIE WHITE

### *Library Committee*

EVERETT AVERY CHURCHILL, *Chairman*

ASA SMALLIDGE KNOWLES  
WILFRED STANLEY LAKE

MYRA EDNA WHITE  
WILLIAM CROMBIE WHITE

RUSSELL WHITNEY

## General Officers of the University

CARL STEPHENS ELL, A.B., M.S., Ed.M., Sc.D. Office 186 Richards Hall	<i>President of the University</i> Res. 21 Beaumont Ave., Newtonville
FRANK PALMER SPEARE, M.H., LL.D.	<i>President Emeritus</i> Res. 90 Commonwealth Ave., Boston
EVERETT AVERY CHURCHILL, A.B., Ed.D. Office 138 Richards Hall	<i>Vice President of the University</i> Res. 48 Long Ave., Belmont
GALEN DAVID LIGHT, A.B. Office 115 Richards Hall	<i>Secretary-Treasurer of the University</i> Res. 3 Preble Gardens Rd., Belmont

## Administrative Officers and Staff of the Day Colleges

### Administrative Officers

WILLIAM CROMBIE WHITE, S.B., Ed.M. Office 152 Richards Hall	<i>Director of Day Colleges and Acting Dean of the College of Engineering</i> Res. 30 Summit Rd., Wellesley
ASA SMALLIDGE KNOWLES, A.B., M.A. Office 352 East Building	<i>Dean of the College of Business Administration</i> Res. 41 Louise Rd., Belmont
WILFRED STANLEY LAKE, A.B., M.A., Ph.D. Office 452 East Building	<i>Dean of the College of Liberal Arts</i> Res. 59 Hinckley Rd., Waban
HAROLD WESLEY MELVIN, A.B., M.A. Office 256 Richards Hall	<i>Dean of Students</i> Res. 44 Houston Ave., Milton
RUDOLPH MAGNUS MORRIS, S.B., Ed.M. Office 153 Richards Hall	<i>Secretary of the Faculty</i> Res. 99 Knollwood Rd., Squantum
WINTHROP ELIOT NIGHTINGALE, A.B., S.B., Ed.M. Office 253 Richards Hall	<i>Director of Co-operative Work</i> Res. 136 Dickerman Rd., Newton Hlds.
EDWARD SNOW PARSONS, S.B., Ed.M. Office 355 Richards Hall	<i>Director of Student Activities</i> Res. 19 Hardy Ave., Watertown
JOHN BUTLER PUGSLEY, A.B. Office 254 Richards Hall	<i>Registrar</i> Res. 23 Hardy Ave., Watertown
MILTON JOHN SCHLAGENHAUF, A.B., B.D., M.A. Office 150 Richards Hall	<i>Director of Admissions</i> Res. 96 Blakely Rd., Medford Telephone Mystic 6148-M
ARTHUR ANDREW VERNON, S.B., M.S., Ph.D. Office 425 Richards Hall	<i>Director of Graduate Study</i> Res. 14 Standish St., Newton Hlds.

### Administrative Staff

FRANK GIVEN AVERILL, A.B. Office 139 Richards Hall	<i>Director of the Development Program</i> Res. 90 Fairbanks Ave., Wellesley Hills
WILLIAM THOMAS CLONEY, JR., A.B. Office 354 Richards Hall	<i>Director of the Publicity Bureau</i> Res. 30 Lantern Lane, Milton
ALBERT ELLSWORTH EVERETT, S.B., M.B.A. Office 253 Richards Hall	<i>Co-ordinator of Co-operative Work</i> Res. 4 Crown St., Auburndale
DAISY MILNE EVERETT Office 115 Richards Hall	<i>Assistant Treasurer</i> Res. 1095 Highland Ave., Needham Heights



GEORGE RAYMOND FENNELL, S.B., M.B.A. Office 150 Richards Hall	Assistant Director of Admissions Res. 42 Fremont Ave., Everett Telephone: Everett 1172-W
MARY B. FOOR Office 41 Richards Hall	Manager of Bookstore Res. 32 Milton Rd., Brookline
CHARLES WILLIAM HAVICE, A.B., M.A., S.T.B., Ph.D. Office 357 Richards Hall	Dean of Chapel Res. 83 Franklin St., So. Braintree
FREDERICK ROBERT HENDERSON, S.B., M.S. Office 153 Richards Hall	Assistant to the Dean of Engineering Res. 223 Park Drive, Boston
PHYLLIS CHAMBERS HOWE Library, East Building	Assistant Librarian Res. 52 Westland Ave., Boston
HENRY ARTHUR KONTOFF, M.D. Office 479 Beacon St., Boston	College Physician Res. Overlook Park, Newton Centre
DONALD HERSHEY MACKENZIE, S.B., Ed.M. Office 355 Richards Hall	Assistant to the Director of Student Activities Res. 34 Exeter St., Wollaston
JOHN CHRISTIE MORGAN, S.B. Office 253 Richards Hall	Co-ordinator of Co-operative Work Res. 24 Walker St., Newtonville
VERNER OLOF NELSON Office 105 South Building	Co-ordinator of Co-operative Work Res. 60 Birchcliff Rd., East Weymouth
RUDOLF OSCAR OBERG, S.B., Ed.M. Office 253 Richards Hall	Alumni Executive Secretary Res. 37 Walker St., Atlantic
ELLIS MERTON PURINTON, B.B.A. Office 253 Richards Hall	Co-ordinator of Co-operative Work Res. 7 Clark Ave., Beverly
J. KENNETH STEVENSON, B.C.S. Office 136 Richards Hall	Assistant to the Vice President Res. 101 Goden St., Belmont
GEORGE WESLEY TOWLE, S.B. Office 253 Richards Hall	Co-ordinator of Co-operative Work Res. 23 Hilltop Ave., Lexington
GRACE LISCOM WATKINS Library, East Building	Assistant Librarian Res. 76 Glendale St., Dorchester
MYRA EDNA WHITE Library, East Building	Librarian Res. 118 Hemenway St., Boston
CYNTHIA WORT Library, East Building	Assistant Librarian Res. 82 Thorndike St., Brookline

### Office and Secretarial Staff

FLORENCE BURTON AVELLAR Secretary to the Treasurer of the University—116R	70 Fenway, Boston
MABEL ELLEN BEAN Secretary to the Assistant to the Vice President—136R	61 Quint Ave., Allston
JUNE BRAGG Registrar's Office—254R	21 Forsyth St., Boston
FLORENCE DOROTHY CARLSON Secretary to the Director of Student Activities—355R	10 Pearl St., Dedham
PRISCILLA SPEARE COLLINS Secretary to the Dean of Students—256R	19A Forest St., Cambridge
VIRGINIA CUSHING DARLING Purchasing Clerk, Treasurer's Office	128 Chestnut St., Boston
MYRTLE CORKISH DONOHUE Secretary to the Dean of the College of Business Administration—352E	266 Brookline Ave., Boston
THELMA GERTRUDE DUNN Bookkeeper, Treasurer's Office	30 Freeman Place, Needham

RUTH PHILLIPS FIOTT Admissions Office—151R	173 Marianna St., East Lynn
MILDRED CURTIS GARFIELD Financial Secretary to the Director of Day Colleges—152R	87 St. Stephen St., Boston
EDNA JANE GARRABRANT Secretary to the Director of Co-operative Work—253R	8 Maynard St., Arlington
RUTH GIBSON Secretary to the Secretary of the Faculty—153R	14 Avon Rd., Watertown
BARBARA MARY GRIEM Admissions Office—151R	57 Grandview Rd., Arlington
PRISCILLA HOPKINS Secretary, Treasurer's Office	223 Beacon St., Boston
ELSIE HINCKLEY HUNT Secretary to the Director of Admissions—150R	100 Linden St., Allston
JANE McFARLAND HUTCHINS Student Union Office—357R	194 Beacon St., Boston
VERA LOUISE JENKINSON Admissions Office—150R	22 Hillside Ave., Arlington
BARBARA KNIGHT Secretary to the Registrar—254R	254 Clifton St., Malden
HELEN LOUISE KOLDERUP Cashier—Central Offices of the University	14 Holden Rd., Belmont
PATRICIA DORA KROUSE Secretary, Central Offices of the University	183 Beacon St., Boston
ELISA KUIVANEN Co-operative Work Office—253R	161 Beacon St., Boston
VIRGINIA E. LONG Admissions Office—151R	Franklin Square House, Boston
ALICE ADA MacKENZIE Secretary to the Director of the Development Program—139R	66 Mayfair Drive, Westwood
JULIA HARRIET MASLEN Secretary to the President—186R	17 Forsyth St., Boston
DOROTHY BRETT MASON Registrar's Office—254R	42 Patten St., Jamaica Plain
DOROTHY MILNE MURRAY Secretarial Assistant—152R	204 Fair Oak Park, Needham
ALYCE ANN NICHOLS Bookkeeper, Treasurer's Office	507 Chestnut St., Needham
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PRESIDENT, SIMMONS COLLEGE  
*"The College and Vocational Education"*

HORACE T. CAHILL  
LIEUTENANT GOVERNOR OF THE COMMONWEALTH  
*"The Challenge to American Citizenship"*

ROBERT P. TRISTRAM COFFIN  
AUTHOR, LECTURER  
*"What Poems Are"*

J. ANTON DE HAAS  
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*"International Affairs"*

GEORGE H. EDGELL  
DIRECTOR, BOSTON MUSEUM OF FINE ARTS  
*"Recent Museum Accessions"*

H. V. KALTENBORN  
NEWS COMMENTATOR  
*"Kaltenborn Edits the News"*

HARRY A. OVERSTREET  
PROFESSOR EMERITUS, COLLEGE OF THE CITY OF NEW YORK  
*"Ten Ways to Reach Wrong Conclusions"*

G. BROMLEY OXNAM  
BISHOP, METHODIST CHURCH  
*"A Date with the World"*

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MANAGER, INDUSTRIAL RELATIONS, EAGLE PENCIL COMPANY  
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*"The Engineer in the New World"*

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DEAN, TUFTS SCHOOL OF RELIGION  
*"The Old Problem of Evil"*

KENNETH C. M. SILLS  
PRESIDENT, BOWDOIN COLLEGE  
*"Students in a Changing World"*

RALPH W. SOCKMAN  
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*"The New Patriotism"*

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*"An Editor Faces an Angry World"*

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# NORTHEASTERN UNIVERSITY

## General Statement

NORTHEASTERN UNIVERSITY is incorporated as a philanthropic institution under the General Laws of Massachusetts. The State Legislature, by special enactment, has given the University general degree granting powers.

The Corporation of Northeastern University consists of men who occupy responsible positions in business and the professions. This Corporation elects from its membership a Board of Trustees in whom the control of the institution is vested. The Board of Trustees has four standing committees: (a) an Executive Committee which serves as an Ad Interim Committee between the regular meetings of the Board of Trustees and has general supervision of the financial and educational policies of the University; (b) a Committee on Housing which has general supervision over the buildings and equipment of the University; (c) a Committee on Funds and Investments which has the responsibility of administering the funds of the University; (d) a Development Committee which is concerned with furthering the development plans of the University.

Founded in 1898, Northeastern University, from the outset, had as its dominant purpose the discovery of human and social needs and the meeting of these needs in distinctive and highly serviceable ways. While subscribing to the most progressive educational thought and practice, the University has not duplicated the programs of other institutions but has sought "to bring education more directly into the service of human needs."

With respect to program, Northeastern has limited itself:

- To offering, in its several schools, basic curricula from which non-essentials have been eliminated,
- To effective teaching,
- To advising and guiding students,
- To giving students the chance to build well-rounded personalities through a balanced program of extra-curricular activities.

The Northeastern Plan of Education is especially designed for the student who must earn while he learns. In the main, it consists of two definite types of education:

- Co-operative Education by Day,
- Adult Education by Night.

The plan has been developed in such a way that experience in jobs with pay is utilized to help boys of limited financial resources secure an education and at the same time gain the maximum

educational benefit from their practical experience. So far as the New England States are concerned, Northeastern University is the only institution whose day colleges, other than the School of Law, are conducted under the Co-operative Plan.

The several schools and programs of the University are operated either under the name "Northeastern University" or by its affiliated schools—the Lincoln Schools and The Huntington Day School for Boys. The following is a brief outline of the principal types of educational opportunities offered.

1. In the field of Co-operative Education there are three day colleges — the College of Liberal Arts, the College of Engineering, and the College of Business Administration. All of these colleges offer five-year curricula. The College of Liberal Arts offers majors in the usual fields of the arts and the sciences leading to the degrees of Bachelor of Arts and Bachelor of Science. The College of Engineering, one of the largest engineering colleges in the United States, has curricula in Civil, Mechanical (with Air-Conditioning and Aeronautical options), Electrical, Chemical, and Industrial Engineering. The College of Business Administration has curricula in Accounting, Banking and Finance, Marketing and Advertising, Journalism, Public Administration, and Industrial Administration. The College of Engineering and the College of Business Administration confer the degree of Bachelor of Science with specification indicating the field of specialization. The Co-operative Plan under which all of these day colleges operate enables the student to alternate regular periods of classroom instruction with supervised employment in an industrial or commercial position, thus combining theory and practice in an exceedingly effective manner. Apart from the educational advantages of the Co-operative Plan is the opportunity for self-support while the student is pursuing his studies at Northeastern University. During the co-operative periods, students not only gain experience but are also paid for their services. Approximately three hundred business and industrial concerns co-operate with Northeastern University in making this program effective.
2. The School of Law conducts both a day and an evening undergraduate program which prepares for admission to the bar and for the practice of the law and leads to the degree of Bachelor of Laws. It also conducts a graduate program in the evening leading to the degree of Master of Laws.
3. The Adult Education Program has been developed in the evening work of the School of Law as indicated above, in



the School of Business, and in the evening courses of the College of Liberal Arts. The School of Business has curricula in Management — with Industrial and Merchandising majors, Accounting, Law and Business Management, and Engineering and Management. The School awards the Bachelor of Business Administration degree with specification and the Bachelor of Commercial Science degree in Law and Business Management. The College of Liberal Arts offers an evening program the equivalent in hours to one-half of the requirements for the A.B. or S.B. degree, providing a general education and preparation for admission to the School of Law. The title of Associate in Arts is conferred upon those who complete this program.

4. In order that larger groups of men and women might be served through its evening schools, Northeastern University operates divisions of the School of Law and the School of Business in co-operation with the Young Men's Christian Association in Worcester and Springfield and of the School of Business in co-operation with the Providence Young Men's Christian Association. With the establishment of the divisions thorough-going methods of supervision were instituted and have been consistently followed and improved, with the result that the divisional work is conducted upon a highly efficient basis.
5. The Adult Education Program has also been developed through the Lincoln Schools, which are affiliated with and conducted by Northeastern University. The classes in these schools are held at convenient evening hours. The Lincoln Technical Institute offers curricula upon a college level in various phases of engineering leading to the title of Associate in Engineering; whereas the Lincoln Preparatory School, accredited by the New England College Entrance Certificate Board, prepares students for admission to college and offers other standard high school programs.
6. The Huntington Day School for Boys, also affiliated with and conducted by Northeastern University, is the outgrowth of a demand in the city of Boston for an urban preparatory school with high educational standards which would furnish thorough preparation for admission to the leading colleges and universities. While easily accessible to the various sections of Boston and to the suburbs, it has the facilities of a country day school and offers a country day school program. This School is one of the leading preparatory schools of the country.

# *Northeastern University and Affiliated Schools*

## *Statistical Summary*

1939-1940

	<i>Administrative Officers and Faculty</i>	<i>Students</i>
General Administration	9	
Northeastern University		
College of Liberal Arts		525
College of Engineering	108	1408
College of Business Administration		538
School of Law	46*	1204*
School of Business	102*	1709*
Evening Courses — College of Liberal Arts	11	117
Affiliated Schools		
Lincoln Technical Institute	37	585
Lincoln Preparatory School	20	422
Huntington Day School for Boys		
Regular Term	16	176
Summer Term	8	143
	<hr/>	<hr/>
Total	357	6827
Less Duplicates	45	476
	<hr/>	<hr/>
	312	6351

\*These figures include the administrative officers, faculties, and students of the Divisions of the University in Worcester, Springfield, and Providence.

## The Co-operative Plan

### *How It Works*

THE co-operative plan works in the following manner. Upperclassmen are divided into two nearly equal groups, one of which is called Division A and the other Division B. Each man is assigned a job with some business or industrial concern. So far as possible each man in one Division is paired with a man in the other Division, so that the two, by taking turns, may occupy one job throughout the entire year. In September the Division A student returns to the University for ten weeks of classroom work. At the end of that time he goes out to work ten weeks with a co-operating firm. His place at the University is then taken by his *alternate*, the corresponding Division B student. When ten weeks more have passed, the Division A man returns to college, and the Division B man returns to the co-operative job. The alternation of work and classroom study continues throughout the year so that an upperclassman has annually twenty weeks at college, twenty-six weeks at co-operative work, and six weeks of vacation.

### *Faculty Co-ordinators*

Students are assigned to a co-ordinator, who interviews them periodically during their freshman year for the purpose of determining their background, abilities, temperaments, and aptitudes. During these interviews the co-ordinator discusses various fields of activity and answers such questions as the students may have in regard to the many phases of business and industry. Each student is studied in the light of his physical condition, scholastic ability, and other factors affecting his probable success in vocational life. These interviews culminate in an agreement between the student and his co-ordinator regarding the field of co-operative work in which the student is to be placed. During his upperclass years the student continues to have frequent conferences with his co-ordinator regarding vocational adjustments and personal problems. In this way the progress of every student is observed and co-ordinated with his college work to the end that he may obtain maximum values from his training at Northeastern.

### *Placement*

The co-ordinator visits co-operating firms and arranges with them for the employment of the students under his charge. The range of opportunities available to Northeastern students is wide,

including practically all phases of industrial life. As a general rule, sophomores are placed upon routine and laborious jobs through which they may prove their fitness for more responsible work. The jobs upon which Northeastern students are employed are in no sense protected opportunities. They are regular jobs under actual business conditions and are held in competition with other sources of supply. The only special privilege accorded Northeastern students is that of attending college on the co-operative plan. The University expects every student to stand on his own feet while he is on co-operative work, and advancement to the more responsible jobs is based entirely upon merit.

### *Supervision and Guidance*

While the University does not adopt a paternal attitude toward co-operative work, it nevertheless assumes certain responsibilities toward students and co-operating firms. Co-ordinators visit each job in order that the employer may report upon the student's achievement and that necessary adjustments may be made. Co-ordinators supervise the assignment of students to various jobs and in conjunction with employers arrange for promotions and training schedules. Problems that arise on co-operative work are adjusted by common agreement of co-ordinator, student, and employer. In the event of special difficulties or dissatisfaction, the case may be adjusted by the Committee on Co-operative work, which comprises several members of the faculty.

Through a series of co-operative work reports prepared during their working periods, students are led to analyze their jobs and to develop a thoughtful and investigative attitude toward their working environment. A most important phase of co-operative work is the opportunity afforded for guidance by the frank discussion of actual problems encountered on the job. The intimate contact between co-ordinator and student is of great worth in helping the student to get the most value from each co-operative work assignment. While the University endeavors to provide every possible opportunity for its students, it expects them at the same time to take the initiative and to assume the responsibility involved in their individual development. To every student are available the counsel and guidance of the faculty, and every resource at its disposal. But the faculty does not coerce students who are uninterested or unwilling to think for themselves.

The co-operative plan is thus designed specifically to provide actual working conditions which afford the student practical experience, give meaning to his program of study, and train him in reliability, efficiency, and team work.



### *Correlation of Theory and Practice*

Co-operating companies employ the students in the various departments of their establishments. The training is thorough. To derive the greatest value from his co-operative work the student is advised to continue in the employ of his co-operating firm for at least one year after graduation, since certain types of work which would afford him valuable experience cannot be made available to him while he is alternating between work and study. Statistics compiled over a period of many years show that on the average about fifty per cent of each graduating class remain with co-operating employers after graduation.

### *Co-operative Work Reports*

The values to be derived from practical experience are further enhanced by required report writing. These co-operative work reports are written during the working periods by all co-operative students. A complete job analysis is required as the first report written on any new co-operative work assignment. Subjects of other reports are selected by the student after conference with his Co-ordinator of Co-operative Work, by whom they must be approved. The reports are designed to encourage observation and investigation on the part of the students and to help them to appreciate more fully the extent and value of their experience. These reports are carefully read by the Co-ordinator and are discussed with the student during the following college period. Exceptionally valuable results are obtained from these reports. The value derived must necessarily be directly proportional to the conscientious and intelligent concentration of effort by the student upon this phase of the work.

### *Co-operative Work Records*

Complete and detailed records are kept of the co-operative work of each student. They are based upon reports made by the employer at the end of each working period; upon occasional personal interviews between the employer and the Co-ordinator; and upon various evidences of the student's attitude toward all the phases of his co-operative work. It is not possible for the student to secure a degree unless this part of the curriculum is completed satisfactorily. These records of practical experience serve as a valuable future reference for the Alumni Placement Division of the Department.

### *Positions Available*

Because of uncertainties of business conditions, as well as other reasons beyond its control, the University cannot and does not guarantee to place students. Although the University in no way discriminates among students of various races and religions, considerable difficulty has been experienced in placing at co-operative work the members of certain racial groups and students who are physically handicapped. However, past experience has demonstrated that students who are willing and capable of adapting themselves to existing conditions are almost never without employment except in periods of severe industrial depression.

### *Earnings*

The rates of pay for students tend to be low because students are given the privilege of attending college on the Co-operative Plan and because effort is made to provide the student with the opportunity of being transferred, at reasonable intervals, from one department to another of the co-operating company. It should be understood that the primary purpose of the Co-operative Plan is training.

The minimum rate of pay will be governed to a very large extent by prevailing wages and hours laws. To assist the student in budgeting his expenses, however, he can plan in normal times on a weekly rate of \$14.

### *Location of Work*

It is the policy of the University to assign students to co-operative work within commuting distance of their homes. This is not always possible, however, and at times it may be necessary for students to live away from home in order to obtain satisfactory and desirable co-operative work assignments.

### *Types of Co-operative Work*

Insofar as possible students are placed at co-operative work in that general field for which they express preference, provided that aptitude, physical ability, temperament, and other personal qualities appear to fit them for this field. Usually students are placed first in the lower ranks of an organization where they may learn the fundamental requirements of the business.

For example, a student interested in manufacturing might be started as an operative on some machine in the plant. As his progress and other conditions warranted he would be transferred to other types of work such as shipping, inspecting, cost finding, adjusting complaints, or bookkeeping, and so on, so that in the course of his four years co-operative training he would have the opportunity to acquire a substantial background in at least some of the functions of factory administration. This progressive type of training is more readily obtained in the employ of one company. A change of company each year provides more a change of environment than a progression of experiences.

Engineering firms, manufacturing companies, public utilities, and many other types of enterprises are employing Northeastern students. In some cases definite training schedules have been established so as to permit the student one full year in each of several important departments.

### *Typical Co-operative Training Schedules*

These schedules are arranged with the basic idea of giving the student a comprehensive training through the several different departments, but must of necessity be varied in accordance with the needs of those departments.

#### BOSTON & MAINE RAILROAD CO.

- ONE YEAR — Erecting Shop
- ONE YEAR — Machine Shop
- ONE YEAR — General work in Machine Shop and Erecting Shop
- ONE YEAR — Mechanical Engineer's Dept.

#### BOSTON EDISON COMPANY

The schedule of the Boston Edison Company is divided into the following general classifications. Very few co-operating students obtain experience in all branches, but students progress from year to year in the respective branches as conditions require.

##### *Standardizing*

- (a) Testing and standardizing of electrical instruments
- (b) Miscellaneous standardization
- (c) Repairs on electrical instruments
- (d) Laboratory high voltage tests

##### *Steam Practice*

- (a) Turbine, engine and boiler tests
- (b) Instrument tests and repairs
- (c) Miscellaneous tests

*Electrical Testing*

- (a) Testing and repairing of electrical instruments in power stations and sub-stations
- (b) Cable tests
- (c) High voltage tests on apparatus and in the field
- (d) Checking up construction work
- (e) Miscellaneous electrical tests

*Chemical Engineering*

- (a) Fuel analysis
- (b) Miscellaneous tests and analysis of oils, water paints, and other materials

*Photography**Office Work*

## HUNT-SPILLER MANUFACTURING CORPORATION

ONE YEAR General laboratory and plant work, including preparation of samples

## Pyrometry

Use and care of metallurgical apparatus

ONE YEAR Complete analysis of coal, coke, limestone, sand, iron, soil, etc.

ONE YEAR Keeping of general metallurgical records, filing, and making of reports

ONE YEAR Analysis for combined, graphitic, and total carbon with a complete knowledge of a carbon combustion apparatus

## PEPPERELL MANUFACTURING COMPANY

ONE YEAR Stock Records

ONE YEAR Production Analysis

ONE YEAR Inventory Control



## General Information

### College Expenses

#### Tuition

THE tuition for all curricula in the Day Colleges is \$250 per year, or \$125 per term. Certain fees and deposits are also required as specified in the following paragraphs. A complete statement of tuition and fee payments is given on page 30.

Students who carry academic loads of greater or less than normal amount may pay their tuition on a semester hour basis.

#### University Fee

All students are charged a University Fee of twenty-four dollars (\$24) each year. This fee is payable in two installments: fourteen dollars (\$14) with the first payment of tuition and ten dollars (\$10) with the second payment of tuition. These charges are included in the schedule of payments on page 30.

The University Fee covers library, laboratory, materials charges, and similar items for which separate fees are frequently charged by other colleges and universities. It is payable by all students regardless of the curriculum in which they are enrolled.

#### Student Activities Fee

Each student in the Day Colleges is charged a student activities fee of sixteen dollars (\$16). This fee is payable at the time of registration and is included in the schedule of payments on the following page. This fee supports in part certain student activities, and includes membership in the *Northeastern University Athletic Association*, *The Northeastern Student Union* and subscription to *The Northeastern News*, the college paper.

The services of a physician are also available for all students under this fee. Minor ailments are treated by the college health officers without additional charge. If the student shows signs of more serious illness, he is immediately advised to consult a specialist or return to his home, where he can get further treatment.

#### Laboratory Deposit

*(Applies only to students taking chemical and chemical engineering laboratory work)*

All students taking laboratory work in chemistry and chemical engineering are required to make a deposit from which deductions

are made for breakage, chemicals, and destruction of apparatus in the laboratory. Any unused portion of this deposit will be returned to the student at the end of the college year. If the charge for such breakage, chemicals, or destruction of apparatus is more than the sum deposited, the student will be charged the additional amount.

Freshmen make a laboratory deposit of ten dollars (\$10) with their first tuition payment at the beginning of the year; upperclassmen make a laboratory deposit of ten dollars (\$10) at the beginning of each term.

### *Schedule of Payments for Freshmen*

<i>Date Due</i>	<i>Amount</i>	
September 10, 1942	Tuition	\$125.00
	Fees	30.00
	Chem. Lab. Deposit	10.00
		<hr/> \$165.00
February 8, 1943	Tuition	\$125.00
	Fees	10.00
		<hr/> \$135.00

### *Schedule of Payments for Upperclassmen*

<i>Division A</i>		
*September 14, 1942	Tuition	\$125.00
	Fees	30.00
		<hr/> \$155.00
*February 1, 1943	Tuition	\$125.00
	Fees	10.00
		<hr/> \$135.00
<i>Division B</i>		
*November 23, 1942	Tuition	\$125.00
	Fees	30.00
		<hr/> \$155.00
*April 12, 1943	Tuition	\$125.00
	Fees	10.00
		<hr/> \$135.00

### *Deferred Payment Fee*

There will be a \$2.00 deferred payment fee added to all bills which are not paid by the Saturday following the date on which payments fall due. When further extensions of time are given on payments which have been previously deferred, an additional \$2.00 fee will be charged for each extension.

\*Students taking chemical laboratory work pay a deposit of \$10 additional.

Failure to make the required payments on time, or to arrange for such payments, is considered sufficient cause to bar the student from classes or suspend him from co-operative work until the matter has been adjusted with the Registrar.

### *Late Registration Fee*

A fee of \$5.00 will be charged for failure to register in accordance with prescribed regulations on the dates specified in the college calendar.

### *Graduation Fee*

A fee of ten dollars (\$10) covering graduation is required by the University of all candidates for a degree. This fee must be paid before the end of the seventh week of the second term in the senior year.

### *Payments*

All payments should be made at the treasurer's office which is located on the first floor of Richards Hall. Checks should be made payable to Northeastern University.

### *Refunds*

The University assumes the obligation of carrying the student throughout the year. Instruction and accommodations are provided on a yearly basis; therefore, no refunds are granted except when students are compelled to withdraw on account of personal illness.

### *Expenses*

The following tables, compiled from expense returns submitted by the student body, give an idea of freshman expenditures under ordinary conditions.

#### *Estimated College Expenses for a Freshman*

Application Fee . . . . .	\$ 5.00
Tuition . . . . .	250.00
University Fee . . . . .	24.00
Chemical Laboratory Deposit . . . . .	10.00
Student Activities Fee . . . . .	16.00
Books and Supplies . . . . .	35.00
	<hr/>
	\$340.00

(Engineering students should add approximately \$25 for drawing instruments and equipment.)

*Estimated Living Expenses Per Week for a Freshman  
Residing Away from Home*

Room Rent.....	\$ 4.00
Board.....	7.00
Laundry.....	1.00
Incidentals.....	2.00
	\$14.00

The figures given above are approximate and may not exactly apply to any one student; however, they will be found to represent fairly well the expense of a freshman who lives comfortably but without extravagance.

*Textbooks and Supplies*

The Northeastern University Bookstore, located in the Basement of Richards Hall, is a department of the University and is operated for the convenience of the student body. All books and supplies which are required by the students for their work in the University may be purchased at the Bookstore.

A Northeastern Bookstore Discount Card is issued to every Day College student at the time of registration and entitles him to a ten per cent discount on all Day College textbooks which he purchases for his own use while in school.

The ten per cent discount does not apply on equipment, supplies or novelties. It is the policy of the bookstore, however, to stock these materials and to sell them at the lowest possible prices.

*Part-Time Work*

Students who find it necessary to accept part-time jobs while attending college may obtain such work through the Director of Co-operative Work.

No student is justified in assuming that the University will take care of his expenses or guarantee to supply him with work sufficient to meet all his needs.

A student should have available a reserve fund adequate to provide for immediate needs and unexpected contingencies. This should ordinarily amount to at least the first year's tuition plus the student activity and other fees, room rent, and board for several weeks, or a total of about \$500.



## *Grades and Examinations*

### *Examinations*

Examinations covering the work of the term are usually held at the close of each term. Exceptions may be made in certain courses where, in the opinion of the instructor, examinations are not necessary.

Condition examinations are given in most subjects once each year without charge. Condition examinations are not given for laboratory courses.

Special examinations may be arranged for only in the Registrar's office, and for all such examinations the University requires the payment of a special fee of five dollars (\$5.00).

### *Grades*

A student's grade is officially recorded by letters, as follows:

- A superior attainment
- B above average attainment
- C average attainment
- D lowest passing grade, poor attainment (the faculty will accept only a limited amount of grade D work toward the Bachelor's degree)
- F failure, removable by condition examination
- FF complete failure, course must be repeated in class
- I incomplete, used for intermediate grades only to signify that the student has not had time to make up work lost through excusable enforced absence from class
- L used in all cases of the removal of a failure by condition examination or by attendance at summer term.

A student who does not remove a condition before that course is again scheduled, a year later, must repeat the course. A condition in more than one subject may involve the loss of assignment to co-operative work.

The responsibility for the removal of a condition rests with the student who is required to ascertain when and how the condition can be removed.

### *Dean's List*

A Dean's List, issued at the end of each term, contains the names of upperclass students who have an honor grade average in all subjects during the preceding period. Freshmen who achieve high scholastic standing are included on a Freshman Honor List,

which is published at the end of each grading period. No student under disciplinary restrictions is eligible for either of the honor lists.

### *Reports on Scholastic Standing*

Freshman reports are issued at the end of each grading period; upperclass reports, at the end of each term. In addition, a special report on review subjects pursued during the summer term will be issued immediately at its close. Questions relative to grades are to be discussed with the student's faculty adviser.

Students are constantly encouraged to maintain an acceptable quality of college work. Parents and students are always welcomed by the college officers and faculty advisers for conference upon such matters.

Parents or guardians will be notified whenever students are advised or required to withdraw from the University.

## *General Conduct*

### *Conduct*

It is assumed that students come to the University for a serious purpose and that they will cheerfully conform to such regulations as may from time to time be made. In case of injury to any building or to any of the furniture, apparatus, or other property of the University, the damage will be charged to the student or students known to be immediately concerned; but if the persons who caused the damage are unknown, the cost for repairs may be assessed equally upon all the students of the University.

Students are expected to observe the accepted rules of decorum, to obey the regulations of the University, and to pay due respect to its officers. Conduct inconsistent with the general good order of the University or persistent neglect of work may be followed by dismissal; if the offense be a less serious one, the student may be placed upon probation. The student so placed upon probation may be dismissed if guilty of any further offense.

It is desired to administer the discipline of the University so as to maintain a high standard of integrity and a scrupulous regard for truth. The attempt of any student to present as his own any work which he has not performed, or to pass any examination by improper means, is regarded as a most serious offense and renders the offender liable to immediate expulsion. The aiding and abetting of a student in any dishonesty is also held to be a grave breach of discipline.

## *Scholastic Year for Seniors*

Seniors of either division who are candidates for a degree in the current year must have completed all academic work, class assignments, theses, regular and special examinations, before twelve o'clock noon of the Saturday next following the close of recitations for seniors.

## *Attendance*

Students are expected to attend all exercises in the subjects they are studying unless excused in advance. Exercises are held and students are expected to devote themselves to the work of the University between 9:00 A.M. and 5:00 P.M., except for a lunch period, on every week day except Saturday. Saturday classes are held only between 9:00 A.M. and 1:00 P.M.

No cuts are allowed. A careful record of each student's attendance upon class exercises is kept. Absence from regularly scheduled exercises in any subject will seriously affect the standing of the student. It may cause the removal of the subject or subjects from his schedule. If he presents a reasonable excuse for the absence, however, he may be allowed to make up the time lost and be given credit for the work; but he must complete the work at such time and in such manner as his instructor in the course may designate.

Laboratory work can be made up only when it is possible to do so during hours of regularly scheduled instruction.

Absences from exercises immediately preceding or following a recess are especially serious and entail severe penalties.

Attendance at all mass meetings of the student body is compulsory. Exceptions to this rule are made only when the student has received permission from the Director of Student Activities previous to the meeting from which he desires to be absent.

## *Student Housing*

### *Housing Regulations*

The University endeavors to exercise due consideration and care for the student's welfare while he is in residence. This necessitates the adoption of the rules and regulations presented herewith.

1. Assignments will be made when the student registers.
2. Students may inspect rooms before accepting an assignment; after reaching a decision students must notify the office of the Registrar, 254R.

3. Students who accept room assignments must retain them for the period of their residence, unless given permission by the Registrar to change.

4. Students are not permitted to live in unsupervised quarters. Under no conditions are groups of students permitted to lease apartments.

5. Students are not permitted to engage rooms without the prior approval of the University. Those violating this rule will be required to give up such rooms immediately and will be assigned by the University to approved quarters.

6. Violation of any of the above rules is considered a breach of discipline and will be dealt with accordingly.

### *Dormitories*

At present the University does not maintain dormitories. Provision, however, is made for students to secure rooms in the vicinity. Many freshmen prefer to take room and board at the fraternity houses, which are all supervised by the University through faculty advisers. For information relative to such housing write the Director of Admissions.

Rooms in the dormitory of the Huntington Avenue Branch of the Boston Y.M.C.A. may be secured only through the Housing Department of the Y.M.C.A. The applicant must present himself in person to a representative of the Department before assignment will be made.

Applicants desiring to room in the Association dormitory are advised to write the Housing Department of the Huntington Avenue Branch, 316 Huntington Avenue, Boston, Massachusetts.



## *Freshman Counseling*

### *Freshman Orientation Period*

In order that freshmen may be ready to pursue their academic work with greater composure and be somewhat acclimated before the beginning of scholastic work, three or four days prior to the first term are devoted to a freshman orientation period. During this time freshmen are advised as to choice of program, and assisted in every way possible in order that they may be prepared to begin serious study and work on the first day of the college term. All freshmen are required to attend all exercises at the University scheduled during the orientation period.

An optional feature of the orientation program is the freshman camp conducted under the auspices of the Student Union. The camp is planned particularly for out-of-town students, although commuters are welcomed. It aims at providing a stimulating and wholesome environment under vacation conditions in which the new men may become acquainted with one another and with members of the faculty. The camp site on Lake Massapoag, in the northern part of Massachusetts, is admirably equipped for this purpose, having ample facilities for baseball, basketball, tennis, boating and swimming. The cost of the two days at camp is nominal, and most freshmen avail themselves of this opportunity for recreation prior to the beginning of the college year.

### *Physical Examination*

All freshmen receive a thorough physical examination at the University during the orientation period. All students are expected to report promptly at the appointed time for examination. Those who fail to appear at the appointed time will be charged a special examination fee of two dollars (\$2.00).

### *Freshman Counselors*

At the time of his matriculation each freshman is assigned to a personal counselor, a member of the faculty, who serves as an interested and friendly counselor during the perplexing period of transition from school to college. A personal record card is prepared for each student, containing certain pertinent data from his preparatory school record, the report of his physical examination at Northeastern, his scores on psychological tests, the results of placement examinations, and any special notes which may be of significance in counseling work. The aim of the freshman counseling system is primarily to assist students in making an

effective start upon their programs and secondarily to acquire for the later use of guidance officers a fund of significant information relative to every freshman. Counseling is under the direction of the Dean of Students, assisted by a clinical psychologist, who handles the diagnosis and remedial treatment of difficult problem cases.

### *Individual Attention to Freshmen*

Not only is attention given to the scholastic problems of the student, but also to personal problems in which advice is needed and desired. The aim is to guide the student to the fullest possible personal development.

The college record of each student is carefully analyzed in the light of what could reasonably be expected of him, in view of his previous school record, his score on psychological tests, and all other factors in his situation. If he is not doing his best work, an investigation is made to determine and eliminate the causes. If he is doing as well as could be expected or better, he is encouraged to continue his efforts. In other words, each student is held to the most effective work possible, through advice, encouragement, and assistance.

## *Scholarships, Prizes and Awards*

### *Trustee Scholarships*

Established in 1928 by the Board of Trustees of Northeastern University. Each year the University grants in the three Day Colleges twenty-five full tuition scholarships to entering freshmen who have demonstrated throughout their preparatory or high school course superior scholastic attainment. For additional information relative to these scholarships communicate with the Director of Admissions. Applications for Trustees' Scholarships must be filed on or before May 15.

### *Charles Hayden Memorial Scholarships at Northeastern University*

Established in 1939 through the generosity of the Charles Hayden Foundation and subject to annual renewal. The Foundation, created by the will of the late Charles Hayden, an alumnus of the Boston English High School, offers annually a sum of money to be distributed as memorial scholarships at Northeastern University. The scholarships are awarded to worthy entering students whose parents are unable to finance the entire cost of their education. To be eligible for consideration a student must have graduated from the English High School or from one of the following high schools in Boston and its metropolitan area: Arlington, Belmont, Boston (Brighton, Charlestown, Commerce, Dorchester, East Boston, English, Hyde Park, Jamaica Plain, Mechanic Arts, Public Latin, Roslindale, Roxbury Memorial, South Boston), Braintree, Brookline, Cambridge (High and Latin, Rindge Technical), Canton, Chelsea, Dedham, Everett, Lexington, Malden, Medford, Melrose, Milton, Needham, Newton, North Quincy, Quincy, Revere, Somerville, Stoneham, Wakefield, Waltham, Watertown, Wellesley, Weston, Weymouth, Winchester, Winthrop. While the scholarships are designed primarily to assist students through their freshman year in college, the Foundation has set up a supplementary loan fund to make available limited assistance to meet exigencies which may arise in the upper class years. Each recipient of a Charles Hayden Memorial Scholarship is presented a properly endorsed certificate and is eligible for membership in the Charles Hayden Scholars Club of the University. Full particulars concerning these awards may be obtained from the Director of Admissions of Northeastern University.

### *Dean's List Scholarships*

Established in 1929. Annually at the Dean's List Dinner three scholarships of one hundred dollars each, known as the Dean's

List Scholarships, are presented to the students with the outstanding records in the sophomore, middler, and junior classes. These scholarships are applicable to the recipients' tuition the first term of the following year.

### *Dean's List Senior Letter*

Established in 1929. At the time of the award of the Dean's List Scholarships a Dean's List Senior letter is presented to the senior student who leads the seniors in the day colleges in scholastic achievement. The letter is a congratulatory one from the President of the University and is a coveted prize.

### *Sears B. Condit Honor Awards*

Established in 1940 through the generosity of Sears B. Condit. In the fall of the year at a University convocation Sears B. Condit Honor Awards, not less than ten in number, are awarded to outstanding students in the upper three classes of the College of Liberal Arts, the College of Business Administration, and the College of Engineering. Students who have received the Dean's List Scholarships are not eligible for one of these Honor Awards. Each award carries a stipend of not less than fifty dollars as well as a certificate of achievement.

### *Boston Society of Civil Engineers Scholarship in Memory of Desmond FitzGerald*

Established in 1931 by the Boston Society of Civil Engineers in memory of Desmond FitzGerald, a former president of the Society and an eminent hydraulic engineer with a distinguished record of service. The scholarship is subject to annual renewal. It has been awarded annually since 1931 to an outstanding Northeastern University senior or junior student in the Department of Civil Engineering of the College of Engineering. The presentation is made by the President of the Boston Society of Civil Engineers at a College of Engineering convocation in the spring of the year.

### *The Senate Award*

Established in 1932. The Senate, the honor society of the College of Engineering, offers annually a scholarship of one hundred dollars to the freshman in the college who has, during the previous year, made the highest scholastic record.



### *The Sigma Society Award*

Established in 1930. The Sigma Society, the honor society of the College of Business Administration, offers annually a scholarship of one hundred dollars to the freshman in the college who has, during the previous year, made the highest scholastic record.

### *The Academy Award*

Established in 1938. The Academy, the honor society of the College of Liberal Arts, offers annually a scholarship of one hundred dollars to the freshman in the college who has, during the previous year, made the highest scholastic record.

### *Henry B. Alvord Memorial Scholarship in Civil Engineering*

Established in 1940 in memory of the late Henry B. Alvord, Professor of Civil Engineering and Chairman of the Department for eighteen years. The award is made annually to a student graduating from an accredited secondary school who has demonstrated superior academic ability and gives promise of succeeding in civil engineering. The grant of two hundred and fifty dollars is made only to an entering freshman who is qualified for and plans to study civil engineering.

### *William J. Alcott Memorial Award*

Established in 1934 by members of the faculty and other friends to perpetuate the memory of William Jefferson Alcott, Jr., a brilliant member of the Department of Mathematics in Northeastern University from 1924 until his death in 1933. The Award is offered annually in the form of a prize purchased with the income to the fund for outstanding scholastic achievement during the preceding year, either in a particular field of interest or for a superior academic record.

### *Public Speaking Contest*

Established in 1922. Each spring the University conducts a Public Speaking Contest for which all students in the day colleges are eligible. Prizes of forty, thirty, twenty, and ten dollars respectively are awarded to the four winning speakers in a contest before the upperclass student body assembled in a general mass meeting. Speeches are original in nature and about ten minutes in length. The judges base their decision on appropriateness of subject, content, and delivery. Preliminary contests are held during the winter in each division.

## *Buildings and Facilities*

### *Boston—A Great Educational Center*

THE fact that Northeastern University is in Boston broadens the educational and cultural opportunities of its students.

Few other cities in the country are so rich in the finest elements of American life. Many of its historic buildings, such as the Old State House, Faneuil Hall, and the Old North Church, have become museums for the preservation of old documents, paintings, and other collections representative of early Colonial life. The Boston Public Library and the Museum of Fine Arts, both within a few blocks of the University Buildings, are widely noted for their treasures of literature and art. Even nearer to the University is Symphony Hall, home of the world-famous Boston Symphony Orchestra. And the many churches within Greater Boston not only afford the opportunity of hearing distinguished preachers but through their student clubs and young people's societies make possible for students a fine type of social and intellectual life.

### *University Buildings*

#### *Location*

Northeastern University, except for the Law School, is housed in three buildings located on Huntington Avenue, Boston, just beyond Massachusetts Avenue and opposite the historic Boston Opera House. The main administrative offices of the University are located in Richards Hall, a four-story brick structure added to the physical plant of Northeastern in 1938.

The chief railroad centers of Boston are the North and South Stations. To reach the University from the North Station, board a car going to Park Street, at which junction transfer to any Huntington Avenue car. To reach the University from the South Station, board a Cambridge subway train for Park Street Under. There go up one flight of stairs and board any Huntington Avenue car.

#### *East Building*

The East Building serves as headquarters for the Colleges of Liberal Arts and Business Administration. In addition, it houses the University Library, the Business Administration Laboratory, and several department offices. Jacob P. Bates Hall is also in this building. The latter is used for University band and orchestra rehearsals, glee club rehearsals, and entertainments, as well as dramatic club work.

### *South Building*

The South Building, located directly behind the East Building, houses the following laboratories: Biology, Industrial Engineering, Chemical Engineering, Hydraulics and Sanitary Engineering, and Electrical Measurements and Dynamo Laboratories. In addition, it provides space for department offices, classrooms, conference rooms and one large drafting room.

### *Richards Hall*

Richards Hall is the first unit of the new Northeastern plant. Its 100,000 square feet of floor area provide ample space for administrative offices, the bookstore, Student Union reading and game rooms, Chapel, and many other facilities.

The major portion of the building is given over to laboratories and classroom areas. Laboratory space is provided for the following: Mechanical Engineering, General and Advanced Physics, Inorganic, Organic, Analytical, and Physical Chemistry, together with several special research laboratories.

Outstanding among the classroom areas are a large chemistry lecture hall and two large classrooms seating 300 and 200 students respectively. On the fourth floor are located three large, light and well-equipped drawing rooms, together with an art room for carrying on designing and drafting which form so important a part of technical work. The penthouse contains a radio laboratory, astronomy laboratory, and a lounge for faculty and alumni.

### *Law School Building*

The building housing the Law School at 47 Mt. Vernon Street is a three-story structure completely equipped with administrative offices, faculty offices, classrooms, library and student recreational rooms. The interior of this building is both commodious and new, the entire structure having been recently remodeled by the University.

### *Laboratories*

The laboratories of the University fall into three categories. The first group includes those for experimental work in the pure sciences of biology, chemistry, and physics. The second includes those for the study of engineering in its major branches (civil, mechanical, electrical, chemical, and industrial). The third comprises the business and statistical laboratory.

In addition to these laboratory facilities which are described in the following pages, motion pictures and lantern slides are frequently used to supplement classroom instruction. For this purpose, there are available motion picture projectors for both sound and silent film as well as several lantern slide projectors.



### *Biology*

The Biological Laboratory is located on the second floor of the South Building, and is well equipped with simple, compound, and binocular dissecting microscopes for work in botany and zoology. In addition, the laboratory possesses unusually good zoological, botanical, parasitological and histological collections.

### *Chemistry*

The Chemical Laboratories located on the fourth floor of Richards Hall were given to the University by the Charles Hayden Foundation. They are splendidly equipped for work in general and inorganic chemistry, qualitative and quantitative analysis, and organic and physical chemistry. In addition several service rooms and space for a limited amount of research are provided.

#### *General Chemistry and Qualitative Analysis*

This laboratory is fully equipped with water, gas, electricity, steam, and fume hoods. A hydrogen-sulphide room, a balance room, and a conference room are also a part of this unit.

#### *Organic Chemistry*

This laboratory provides about six feet of working space for each student. The facilities are similar to those in the general chemistry laboratory, and in addition, there is provided a large evaporating unit and an organic combustion furnace.

#### *Quantitative Analysis and Physical Chemistry*

The tables and fume hoods and other equipment in this room are similar to those in the Organic Laboratory. In addition, a large drying oven, special balances, electrical instruments, temperature measuring devices, and other specialized apparatus are provided.

A small laboratory for technical analysis of such materials as coal, vegetable oils, petroleum, textiles, and rubber adjoins the main laboratory, and a special laboratory is also available for electrolytic work.

#### *Research*

Three small laboratories are equipped for advanced research. These are available for graduate thesis investigations.

### *Physics*

The Physics Laboratories located on the second floor of Richards Hall are fully equipped for elementary and advanced study as well as research. In addition an astronomy laboratory and a radio laboratory are located in the penthouse on the West Building.



*General*

This laboratory, designed for elementary instruction, is provided with gas, water, and electricity. A balance room, a spectrometer room, a photographic room, and a photometer room are directly connected with this laboratory. Sufficient apparatus is available so that ordinarily students may work alone on most experiments.

*Advanced*

This laboratory is designed with a view to both precision and flexibility. A special switchboard provides single phase and polyphase alternating current and a variety of direct current potentials. A workshop with lathe, drill press, grinder, and other tools as well as two separate research rooms complement the laboratory. A large number of special instruments plus considerable auxiliary apparatus gives a well rounded supply of equipment for advanced study and research.

*Astronomy and Radio*

The astronomy laboratory is provided with equipment for grinding mirrors and constructing telescopes, and a platform on the roof provides a very good unobstructed view for making observations.

The radio laboratory is a completely shielded room and houses the amateur transmitting station which operates on both radio-telephone and radiotelegraph. Facilities are also available for research.

*Civil Engineering*

Most of the laboratory work in civil engineering is, of course, actual field work in surveying. A considerable amount of demonstration equipment and models are available for use in the study of structures, hydraulics, and sanitary engineering.

*Field Work*

The Department of Civil Engineering is provided with a variety of excellent equipment for field work. The instruments have been chosen to make possible the working out of advanced as well as elementary field problems, and to acquaint the students with the principal makes and types of instruments in general use.

*Hydraulics and Sanitary Engineering*

This laboratory located on the first floor of the South Building is equipped with demonstration measuring devices for use in connection with the courses in hydraulics.

Complete equipment is also provided for water and sewage analysis, and research students can be accommodated in this field.

## *Mechanical Engineering*

The Mechanical Engineering Department has a suite of well equipped laboratories containing a large variety of modern machines and occupying over 10,000 square feet of floor space in the basement of Richards Hall. Special areas have been set aside and equipped for oil testing, concrete mixing, mechanics research, and similar purposes. Auxiliary equipment is, of course, available for making all the usual tests and measurements.

### *Steam Power*

This equipment includes a wide variety of steam engines, turbines, pumps, heat exchangers, and measuring instruments.

The auxiliary steam power plant operated by the University and the Boston Y.M.C.A. is also used for testing purposes. This plant consists of four horizontal return tubular boilers, two burning coal and two burning fuel oil. These feed three reciprocating steam engines and one turbine which in turn drive four direct current generators.

### *Internal Combustion and Aeronautics*

The internal combustion equipment includes a number of gas and oil, automobile, airplane, and Diesel engines. Most of these are set up for running experimental tests, but several are available for dismantling and demonstration purposes.

In addition to the study of airplane engines, the laboratory is equipped with a small wind tunnel for experimental work in aerodynamics.

### *Refrigeration, Heating, and Air Conditioning*

Included under this heading are an ammonia refrigerating machine, a constant temperature room equipped for either heating or cooling, and a large air conditioner unit.

### *Testing Materials and Heat Treatment*

For tension, compression, bending, and shearing tests, the laboratory is equipped with a 300,000 lb. capacity Riehle and a 50,000 lb. capacity Olsen, as well as several smaller testing machines. For other tests the laboratory has cement testers, torsional testing machines, impact testers, fatigue testers, hardness testers, extensometers, oil testing equipment calorimeters, as well as instruments for measuring speed, vibration, temperatures, pressures and flow of fluids.

For heat treatment studies an electric furnace and a gas fired furnace are available. Equipment magnifying up to 2600 diameters is available for photographing crystalline structures, and the laboratory has polaroid equipment for photoelastic stress analysis.

### *Machine Shop*

Adjoining the laboratory is a machine shop fully equipped with machine tools, welding equipment, and a small forge.

### *Electrical Engineering*

The basement of the South Building is occupied by the electrical laboratories. These cover an area of approximately 7,800 square feet and include the dynamo, measurements, and high tension laboratories.

#### *Dynamo*

This laboratory is provided with both 60 cycle 3 phase 230 volt alternating current and 115-230 volt three-wire direct current. The equipment includes more than sixty motors and generators of different types together with the necessary auxiliary equipment to operate and test them. The motors and generators have been selected so as to reduce as much as possible the risk from high voltage while making available to the students a representative range of commercial apparatus.

#### *Electrical Measurements*

The equipment here is of two distinct types: first, that planned primarily for teaching principles of measurement, and secondly, that which is used in teaching advanced standardizing methods as well as for calibrating instruments in other laboratories of the University. Briefly, this laboratory is equipped for practically any work in electrical measurements except for the absolute determinations carried on in national standardizing laboratories.

#### *High Tension*

This laboratory is equipped with the necessary transformers and auxiliary equipment to provide 4 Kva. at 50,000 volts potential. A special room has been equipped for cable and insulation testing, and impulse testing of insulation is made possible by a surge generator capable of producing waves having crest values up to 100,000 volts. A 4,000 ampere low voltage transformer is also available for the study of the effects of heavy currents in conductors, switches, and contacts.

### *Chemical Engineering*

The Chemical Engineering Department has under its supervision the Chemical Engineering Laboratory and the Industrial Chemical Laboratory. These occupy at the present time approximately 1600 square feet of space on the second floor of the South Building.

#### *Chemical Engineering*

This laboratory is primarily devoted to the study of the various unit operations. These include flow of fluids, heat transfer, dis-



tillation, evaporation, absorption, drying, filtration, separation, crushing, and grinding. The equipment, therefore, includes flow meters, condensers, heat exchangers, distillation columns, vacuum dryer, air conditioning cabinet, filter press, screens, centrifuge, crusher, ball mill, and sieve shaker, as well as general equipment such as tanks, blowers, mixers, and scales.

### *Industrial Chemistry*

This laboratory is used mostly for process development work and is equipped with high pressure steam, compressed air, vacuum, and other facilities usually found in a chemical laboratory. Other equipment includes a colloid mill, electric oven, high temperature gas oven, and a hydraulic press.

### *Industrial Engineering*

Students in the Department of Industrial Engineering share in the use of the Mechanical Engineering Laboratories and the Business Laboratory. The Industrial Engineering Laboratory itself is located on the first floor of the South Building and is devoted exclusively to methods engineering (motion and time study work).

### *Methods Engineering*

This laboratory is completely equipped with the latest facilities and tools used by methods engineers. Besides the general equipment consisting of benches, tables, lathe, jigs, fixtures, and racks, the laboratory has an ample supply of time study boards, stop watches and timers for time study work. There is also available complete motion picture equipment and microchronometers for micromotion work.

### *Business Administration*

Students in Industrial Administration share in the use of the Industrial Engineering Laboratory which is devoted to Motion and Time Study work. In addition, all students in the College of Business Administration have access to the Business Laboratory located on the third floor of the East Building.

### *Business Laboratory*

All of the commonly used office machines are available for laboratory work in accounting and statistics. These are available in a special room together with necessary library services, including Moody's Manuals, Poor's Manuals, and various charts and maps. The laboratory is in charge of a graduate assistant whose work is to maintain the machines in excellent condition and to give instruction in their uses. Principal pieces of equipment include duplicators, typewriters, hand and electric calculators, and hand and electric adding machines.



## *Design and Drafting Rooms*

The University possesses large, light, and well-equipped drawing rooms for the carrying on of the designing and drafting which form so important a part of engineering work. These rooms are supplied with lockers containing the drawing supplies, files containing blue prints, and photographs of machines and structures that represent the best practice. Drafting room blackboards are equipped with traveling straight edge devices which facilitate speed and accuracy in blackboard demonstrations.

## *Libraries*

The new library is located on the first floor of the East Building. The reading room seats 244 students at one time, and the stack capacity approximates 25,000 volumes. Here are available all of the general reference books, most of the professional and scientific volumes, and most of the periodicals to which the University subscribes.

Library hours are as follows:

8:45 A.M. to 10:00 P.M. Mondays through Fridays

8:45 A.M. to 1:00 P.M. Saturdays

Closed on Sundays and Holidays

The library is under the direction of a librarian and three assistants all of whom have had special training for the work.

A general reading room and library is maintained by the Northeastern Student Union in Room 356, Richards Hall. The books located here are chiefly non-technical works dealing with contemporary affairs, religious problems, international relations, travel, etc., among which students may browse during periods of relaxation. A few of the literary and religious periodicals are also available in this room.

## *Boston Public Library*

All members of the University, whether resident or non-resident students, have the privilege of taking books from the Boston Public Library and of using the library for general reference and study. Inasmuch as this is one of the best in the country, it presents unusual opportunities to the students. Within a few minutes' walk from the University, it enables students to have unlimited reference at any time to books and periodicals bearing upon their studies.

## *Lecture Assembly Halls*

Through special arrangement, Jordan Hall, Symphony Hall, and the Boston Opera House are made available for assembly purposes. These halls provide ample space for student activity assemblies and for special lectures by noted men. All the students in college at any period assemble for one hour each week throughout the college year. More than half of the assembly sessions are devoted to interests and activities developed by the students themselves. The other assembly periods are devoted to special lectures, sometimes under the direction of the student body and sometimes under the direction of the faculty. The special lectures are devoted to those elements of life which count most in the development of a man's viewpoint and his character.

## *Equipment for Physical Training*

Northeastern has exceptional facilities for all-round physical training. The gymnasium is one of the most complete in New England. Adjoining Richards Hall is a large field equipped for athletics. Here are two tennis courts, an outdoor gymnasium, a rifle range, a baseball cage, jumping pits, and a track with a 100-yard straightaway.

## *Natatorium and Gymnasium*

The Natatorium of the University is located in the East Building between the assembly hall and gymnasium. It is 75 feet long and 25 feet wide and is generally regarded as the finest of its kind in this area.

The Gymnasium is known as the Samuel Johnson Memorial Gymnasium and provides the following facilities: three gymnasiums, a twelve-lap running track, two large exercise rooms, boxing and wrestling rooms, handball and squash courts, bowling alleys, showers, steam baths, massage rooms, electric cabinet baths, and locker rooms.

## *Huntington Field*

Huntington Field, the University athletic field, is located on Kent Street in Brookline and provides ample facilities for track, baseball, football and other outdoor sports. The University maintains bus service between its Huntington Avenue plant and the Huntington Field making it possible for students to get back and forth with a minimum loss of time. The field is equipped with a new and commodious field house as well as ten sections of stadium seats for spectators.

## *Student Activities*

NORTHEASTERN University regards student activities as an integral part of its educational program. One of the main departments of the University is charged with the responsibility of co-ordinating the various types of activities and of administering the social, musical, literary, and athletic organizations in such a way as to enable each to contribute in a wholesome, worth while manner to student life at Northeastern. Every student is encouraged to participate in such activities as may appeal to him, although a standard of scholarship which is incompatible with excessive devotion to such pursuits is required of all students.

Members of the faculty also are interested in the informal aspects of the college program. Teaching loads are kept sufficiently low so that the instructional staff may have ample opportunity to mingle with students outside of the classroom in social activities and on the athletic field. In fact, some member of the faculty is appointed to serve as adviser for each student activity. His function is not to dictate how the organization shall be run, but to encourage the students in their extra-curricula endeavors and to give them the benefit of his mature point of view in solving the problems that inevitably arise.

One of the outstanding contributions of the co-operative plan in the field of higher education has been its capacity to develop in students those powers of social understanding that are so essential to success in professional life. At Northeastern the program of student activities is made to contribute to this end in a very real way. It is a conscious aim of the student activities advisers to develop among their advisees those qualities of personality and character which will enhance their usefulness as future professional men and citizens. Students have splendid opportunities to develop administrative and executive ability as leaders of undergraduate organizations. No academic credit is awarded for any student activity. This has been no deterrent, however, to student participation in extra-curricula activities, for a recent survey of the undergraduate body showed that over 90% of the enrollment were engaged in one or more forms of student activity.

### *Student Council*

Student government of the Day Colleges at Northeastern University is vested in the Student Council, composed of elected representatives from the various classes. The Council is the authority on all matters relating to student policies not definitely connected with classroom procedure. It has jurisdiction, subject



to faculty approval, over all such matters as customs, privileges, and campus regulations. The Dean of Students serves as faculty adviser to the Student Council.

### *Northeastern Student Union*

The purpose of the Northeastern Student Union is to carry out the work of a Christian association within the University. It endeavors to deepen the spiritual lives of Northeastern men through the building of Christian character, to create and promote a strong and effective Northeastern University spirit in and through a unified student body, to promote sociability, and to emphasize certain ethical, social, civic, intellectual, economic, physical, vocational, and avocational values.

All students are encouraged to participate in the activities of the Union, no matter what their religious faith, as the work of the Union is entirely non-sectarian. A good moral character is the only requirement for eligibility to membership. It is hoped that as many students as can will participate in this ideal extra-curricula work.

The Union conducts a weekly Chapel Service in the little chapel in Richards Hall, to which all faculty members and students are invited. The service, which is non-sectarian and voluntary, is held on Thursday mornings from 8:40 to 8:55 o'clock. Many eminent preachers of Greater Boston are engaged to deliver brief addresses.

### *Athletic Association*

All students in the Day Colleges are members of the Northeastern University Athletic Association. Policies of the association are passed upon by a Faculty Committee on Student Activities. This committee decides what students are eligible to participate in athletics, what the various sports schedules shall be, and what students may be excused from classes to represent the University on athletic trips.

The actual administration of the athletic program is in the hands of a second committee, known as the General Athletic Committee, which consists of the Director of Student Activities, the captains and managers of all varsity teams, and the coaches as ex officio members.

The University maintains both varsity and freshman teams in baseball, basketball, cross-country, football, hockey, and track. Intercollegiate games and meets are arranged with the leading colleges in the East. In addition to intercollegiate athletics the athletic association conducts an intramural program in various sports.



## *Publications*

### *"The News"*

A college newspaper, the *Northeastern News*, is published each week throughout the college year by a staff selected from the student body. The copy is prepared, edited, and published by the students themselves with the counsel of a faculty adviser. Opportunity is afforded for the students to express their opinions on subjects relating to study, co-operative work, social events, or topics of the day. Positions on the *News* staff and promotions are attained by competitive work. The paper is in part supported by advertising, both national and local, and in part by a portion of the student activities fee. The *Northeastern News* is a member of the Eastern Intercollegiate Newspaper Association, and sends one of its editors to the annual convention of this association each year. Copies of the *News* are mailed to upperclassmen when they are at co-operative work and to freshmen after the close of their college year.

### *"The Cauldron"*

The combined senior class publishes annually a college year book, *The Cauldron*. It is ready for distribution in the latter part of the second semester and contains a complete review of the college year with class histories, pictures of all seniors, of the faculty, and of undergraduate groups, as well as a miscellany of snapshots and drawings contributed by students.

## *Honor Societies*

Three honorary societies are chartered by the University in its Day Colleges:

The Senate, in the College of Engineering.

The Sigma Society, in the College of Business Administration.

The Academy, in the College of Liberal Arts.

Election to the college honorary societies is founded primarily upon scholarship, but before a man is privileged to wear the honorary society insignia he must give evidence of an integrity of character and an interest in the extra-curricula life of the University as well as an acceptable personality. The Societies have memberships consisting of the outstanding men in the Day Colleges. Election to the honorary society is the highest honor that can be conferred upon an undergraduate.

## *Professional Societies and Clubs*

To assist in the promotion of social, cultural, and intellectual advancement through informal channels, a number of professional societies and clubs are sponsored.

### *National Engineering Societies*

Students in the several professional curricula of the College of Engineering operate Northeastern University Sections of the appropriate national engineering societies. Chief among these are the following:

American Society of Civil Engineers  
Boston Society of Civil Engineers  
American Society of Mechanical Engineers  
American Institute of Electrical Engineers  
American Institute of Chemical Engineers  
Society for the Advancement of Management

Members of the engineering faculty who hold membership in the parent organizations serve as advisers to these student groups. Meetings are held regularly, usually at night so that students from both divisions may attend, and practicing engineers are invited to address the sections. Occasionally appropriate motion pictures are shown, or the group visits some current engineering project in the vicinity of Boston. The College of Engineering encourages these student sections of the technical societies in the belief that they provide a wholesome medium for social intercourse as well as a worth while introduction to professional life.

Membership in the student sections of the American Society of Civil Engineers and Boston Society of Civil Engineers, the American Society of Mechanical Engineers, or the American Institute of Electrical Engineers also includes membership and privileges of the Engineering Societies of New England. This organization is an affiliation of all the major technical societies of Boston and vicinity and provides valuable lectures, smokers, and informal meetings with the outstanding men engaged in engineering work in Boston and vicinity.

### *Astronomy Club*

Membership in the Astronomy Club is open to all students in the College of Engineering who maintain satisfactory scholastic standing. The club has access to machine shops for the construction of telescopes and other instruments. It also has quarters in the penthouse on the fifth floor of Richards Hall. Meetings are held twice a month for the purpose of making astronomical observations and carrying on appropriate discussions.

### *Banking and Finance Club*

The purpose of this organization is to increase among its members the knowledge of the theory and practice of banking. Any student of Northeastern University, while enrolled in any of the banking courses of the College of Business Administration, is eligible to active membership in this club. Meetings are held each

ten week period at which banking executives from Greater Boston are invited to discuss current issues in the field.

#### *Camera Club*

The Camera Club welcomes all men interested in photography. Weekly discussions and special evening lectures by guest artists are part of the yearly program. Field trips, monthly photo contests and a general exhibition add to the interest and progressive work of this organization.

#### *Chess Club*

The Chess Club gives both beginners and experts an opportunity to enjoy the game. Yearly tournaments are held among the members and, in past years, the best men have engaged in inter-collegiate competition.

#### *Combined Musical and Dramatic Clubs*

The Department of Student Activities sponsors the following musical clubs: a concert orchestra, a band, a glee club, a banjo club, and a dance orchestra, for which all students with musical ability are eligible. Membership in the various musical clubs is attained by competitive effort.

Each organization has a faculty adviser and each elects a representative to the Musical Clubs Council. The purpose of this council is to co-ordinate the various musical activities of the Day Colleges. At the annual Musical Clubs Banquet, held early in the spring, charms are awarded to the leaders and managers of the several clubs and to members who have played over a period of three full years.

The various musical clubs, in conjunction with the Dramatic Club, combine in an annual mid-winter entertainment and participate in occasional outside public engagements throughout the college year.

Students interested in dramatics have an opportunity to cultivate this art under faculty coaches who co-operate with the Dramatic Club in the production of several pieces in the course of each college year. Frequently the Northeastern Dramatic and Glee Clubs collaborate with those of Simmons College in light operas such as those of Gilbert and Sullivan.

#### *Debating Society*

The purpose of the Debating Society, formed in 1936, is "to foster and promote an interest and facility in formal argumentation; to develop an impartial, unbiased, and intellectual consideration of questions and issues of current interest; and to sponsor intercollegiate relationships and competition in the debating field." Membership is open to all students of the Day Colleges.



### *German Language Club*

Students are given an opportunity in this club to use their knowledge of German in ways that give them entertainment as well as a greater appreciation of foreign customs and literature.

### *International Relations Club*

The International Relations Club was founded in 1932 for the purpose of studying and discussing those current national and international events and issues which vitally concern our American life and institutions.

It is the intention of the club to deal with all questions in an impartial and broadminded manner, and to take an intelligent and effective part in promoting international understanding and harmony. The club maintains contacts with similar organizations in other colleges.

Membership is not open to freshmen, and only to those upperclassmen who maintain good scholarship.

### *Law and Accounting Club*

All students interested in accounting and law are invited to join this stimulating club. Problems and cases involving the interrelations of accounting and law are presented and discussed at club meetings. Although upperclassmen usually present problems arising out of thesis or co-operative work, speakers from the professional world come to the meetings to present papers and lead the student discussion.

### *Mathematics Society*

The Mathematics Society encourages the study of topics of mathematical interest which are either outside or beyond the scope of the regular mathematics courses. Membership is restricted to those men who have completed one and one-half years of study in mathematics and have an average grade of not less than "C" in mathematics courses up through differential calculus. The club meets once every five weeks in the evening. Although membership is limited to upperclassmen, any student is always welcome to any meeting, and freshmen especially interested in mathematics are always welcome.

The final program of the year is devoted to a dinner meeting for which some prominent outside speaker is procured.

### *N. U. Chemical Society*

This organization of chemists (as distinguished from chemical engineers) was formed to meet the growing need among those students majoring in chemistry for a professional society of their own. The meetings are devoted to a discussion of problems in the field of pure chemistry.



### *Radio Club*

One of the most popular undergraduate activities is the Radio Club. Members are provided opportunity for code practice and are encouraged to obtain their amateur licenses. The Club owns and operates station W1KBN, a short wave transmitter, located in the Radio Laboratory in the penthouse of Richards Hall. Meetings are held about once a month for the discussion of technical matters. Practicing radio engineers are frequently invited to address the Club at evening meetings, when students in both divisions may attend.

### *Rifle Club*

Organized a number of years ago, the Rifle Club was so successful that in 1933 riflery was recognized as a minor sport. Members of the club are given instruction in the art of rifle shooting. Those students who excel in intra-mural competition are selected for the team representing the University in intercollegiate contests. Practice sessions are held twice a week in the University rifle range. Membership is open to all students.

### *Yacht Club*

Only recently formed, the Yacht Club has taken steps to enter the Intercollegiate Yacht Racing Association, and a drive is under way to procure boats for the use of the members.

## *Class Organization and Activity*

Each of the classes in the Day Colleges elects its officers and carries on activities as a class. Dances are sponsored by the classes at regular periods throughout the year. One of the high lights of the social program is the Junior Promenade, held each spring at one of the Boston hotels.

Seniors plan a whole week of activities just prior to Commencement in June.

Freshmen are required to wear the red and black cap distributed through the Department of Student Activities in order that they may be readily distinguishable to each other and to upperclassmen.

## *Convocations*

The hour from 12:00 to 1:00 on Wednesdays throughout the year is set aside for convocations. Attendance is compulsory. Arrangements are made to bring before the student body some of the ablest and foremost thinkers of the day. A list of speakers

for the year will be found on page 17 of this catalogue. When the convocation hour is not occupied by a University lecturer, class meetings, concerts, or athletic rallies are held instead. Such gatherings are under the direction of the Department of Student Activities.

### *Fraternities*

There are at present ten local Greek letter fraternities chartered by Northeastern University. Each fraternity is provided with a faculty adviser who is responsible for the proper administration of the fraternity house under the rules and regulations established by the faculty. The list of fraternities in the order of their establishment is as follows:

- |                       |                     |
|-----------------------|---------------------|
| 1. Alpha Kappa Sigma  | 6. Phi Beta Alpha   |
| 2. Beta Gamma Epsilon | 7. Phi Gamma Pi     |
| 3. Eta Tau Nu         | 8. Sigma Phi Alpha  |
| 4. Nu Epsilon Zeta    | 9. Kappa Zeta Phi   |
| 5. Sigma Kappa Psi    | 10. Gamma Phi Kappa |

Elected representatives from each fraternity make up an Inter-Fraternity Council, a body which has preliminary jurisdiction over fraternity regulations. Its rulings are subject to the approval of the Faculty Committee on Student Activities.

## *The Alumni Association*

The alumni of the Day Colleges are organized to promote the welfare of Northeastern University, to establish a mutually beneficial relationship between the University and its alumni, and to perpetuate the spirit of fellowship among members of the Alumni Association.

The work of the General Alumni Association is supplemented by the activities of regional alumni clubs located throughout the east and middle west. The local clubs meet periodically in their respective centers to discuss matters pertaining to the University and its alumni. Meetings are also held in conjunction with the visits of Northeastern's athletic teams to the various club centers.

### *Officers of the Alumni Association*

#### *President*

GEORGE A. MALLION '20

#### *Secretary*

RONALD C. DAVIS '40

#### *Vice President*

JAMES W. DANIELS '25

#### *Treasurer*

WILLIS P. BURBANK '31

### *Executive Committee*

SIDNEY A. STANDING '32

KENDALL BLANCHARD '29

JAMES W. DANIELS '25

GEORGE DAVENPORT '28

EARL H. THOMSON '25

HAROLD L. BURTON '29

#### *Alumni Executive Secretary*

RUDOLF O. OBERG '26

#### *Alumni Faculty Representative*

G. HARRY MESERVE '25

### *Alumni Council Representatives*

1913-1920—

LAWRENCE F. BLACKWELL

BERNARD H. CAPEN

PERRY F. ZWISLER

1921—ROGER E. SPEAR

1922—RAYMOND J. BRADBURY

1923—EDWARD J. PERRY

1924—H. RAYMOND BENSON

1925—RENE G. MAURETTE

1926—HERBERT A. WILSON

1927—WILLIAM J. URQUHART

1928—EARL R. GRANT

1929—JAMES H. KINGHORN

1930—

ALEXANDER G. MACGREGOR

1931—JOHN E. VADALA

1932—RAYMOND W. JAMES

1934—JAMES P. SCOBIE

1935—EDWARD V. KIRKLAND

1936—E. STANLEY NOWERS

1937—WARREN L. GANONG

1938—HAROLD R. BONNYMAN

1939—WILLIAM E. FEIDT

1940—WALLACE E. MCQUARRIE

1941—

## THE COLLEGE OF ENGINEERING

### *Aims and Methods*

ENGINEERING has been defined as the art of applying the resources of material and power in nature to the use and convenience of man. The design and construction of bridges, power plants, water works, skyscrapers, industrial plants, machinery, transportation systems, and communications systems thus clearly fall within the scope of engineering. And as scientific research has advanced into new areas, the task of putting these discoveries to practical use has also fallen to the engineer.

Because an engineering education teaches young men to search out the truth, to think clearly, and to formulate conclusions based upon a solid foundation of facts, engineers are being called more and more to occupy positions of responsibility in the management of our great industrial enterprises. Even in such diverse fields as banking, public health, and public administration, this so-called engineering approach is in demand.

In consequence of this extremely wide field of endeavor open to engineers, the problem of providing a technical training adequate to cope with the design and construction of buildings, machinery, and equipment, and at the same time a training broad enough to develop a well-rounded personality and a sense of social responsibility, is by no means simple of solution. Northeastern University seeks by means of its educational program, first of all to develop men of well-rounded personality capable of meeting and discharging their responsibilities as future citizens and leaders in their own communities. At the same time, the courses of study prescribed for students in the College of Engineering are designed to develop engineers technically competent to undertake professional responsibilities in their chosen fields of endeavor.

To this end, the College of Engineering offers separate curricula in five major branches of engineering: namely, civil, mechanical, electrical, chemical, and industrial. Since a basic training in science and mathematics is essential to all fields of engineering, the first year's curriculum is identical for all engineering students, and a student may change his field of specialization at the end of the first year without loss of time. Throughout his entire college career, the student is required to take a number of courses of a cultural nature designed to broaden his point of view and to help develop a well-balanced outlook. Individual laboratory instruction in addition to classroom work is employed as far as possible, and the co-operative plan of education, enabling the students to obtain a first-hand acquaintance with actual industrial and engineering operations, goes a long way toward bridging the gap between "theory" and "practice".



## *Admission Requirements*

**A**PPPLICANTS for admission to the freshman class without restrictions must qualify by *one* of the following methods:

1. Graduation from an approved course of study in an accredited secondary school, including prescribed subjects listed below.

2. Completion of fifteen acceptable secondary school units with a degree of proficiency satisfactory to the Department of Admissions.

3. Examinations.

Certificate of entrance examinations passed for admission to recognized colleges and technical schools may be accepted.

### *Prescribed Subjects for Admission*

#### *College of Engineering*

Algebra (quadratics and beyond)	2 units
Plane Geometry	1 unit
*Physics or Chemistry	1 unit
History, Social Studies and/or Foreign Language	2 units
English	3 units
**Electives	6 units
	<hr/>
Total	15 units

A unit is a credit given to an acceptable secondary school course which meets at least four times a week for periods of not less than forty minutes each throughout the school year.

Entrance examinations are not required of students whose transcripts of record are acceptable, but the Committee on Admission reserves the right to require a candidate to present himself for examination in any subjects that it may deem necessary because of some weakness in his secondary school record.

### *Other Requirements*

These formal requirements are necessary and desirable in that they tend to provide all entering students with a common ground upon which the first year of the college curriculum can be based. But academic credits alone are not an adequate indication of a student's ability to profit by a college education. Consequently the Department of Admissions takes into consideration, along

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\*Physics is recommended.

\*\*Not less than four of the "electives" must be in one or more of the following academic branches: Languages, Natural Science, Mathematics, Social Sciences, History.

with the formal requirements stated on page 61, many other factors regarding candidates for the freshman class. A student's interests and aptitudes in so far as they can be determined, his capacity for hard work, his attitude toward his classmates and teachers in high school, his physical stamina, and, most important of all, his character,— all these considerations are carefully weighed. In this way the University seeks to select for its student body those who not only meet the academic admission requirements but who also give promise of acquitting themselves creditably in the rigorous program of training afforded by the co-operative plan and of later becoming useful members of society.

### *Personal Interview*

Candidates for admission should communicate with the Director of Admissions, who will advise them frankly on the basis of past experience. A personal interview is always preferred to correspondence, and parents are urged to accompany their sons whenever this is possible. Effective guidance depends in large measure upon a complete knowledge of a candidate's background and problems. Parents invariably are able to contribute much information that aids the admissions officer in arriving at a decision. In general, a student is likely to be more successful in his college work if he does not enroll under the age of seventeen.

Candidates are urged to visit the Office of Admissions for personal interview if it is possible for them to do so before submitting their applications. Office hours of the Department are from 9:00 A.M. to 4:00 P.M. daily; Saturdays to 12:00 M. The Director of Admissions will interview applicants on Wednesday evenings but by appointment only.

### *Application for Admission*

Each applicant for admission is required to fill out an application blank whereon he states his previous education as well as the names of persons to whom reference may be made in regard to his character and previous training.

An application fee of five dollars (\$5.00) is required when the application is filed. This fee is non-returnable.

The last page of this catalogue is in the form of an application blank. It should be filled out in ink and forwarded with the required five dollar fee to Director of Admissions, Northeastern University, Boston, Mass. Checks should be made out to Northeastern University.

Upon receipt of the application, properly filled out, the College at once looks up the applicant's references and secondary school records. When replies have been received to the various inquiries, the applicant is informed as to his eligibility for admission.

Applications should be filed not later than May 1, thus allowing ample time for the investigation of the applicant's secondary school records before he enrolls in the College.

The University reserves the right to place any entering student upon a period of trial. Whether he shall be removed from trial at the end of this time or requested to withdraw will be determined by the character of the work he has accomplished and his conduct during this trial period.

### *Registration*

Eligibility for admission does not constitute registration. Freshmen register at the University on September 10, 1942. No student is considered to have met the requirements for admission until he has successfully passed the required physical examination.

### *Advanced Standing*

Students transferring from approved colleges will be admitted to advanced standing provided their records warrant it. Whenever a student enters with advanced standing and later proves to have had inadequate preparation in any of his pre-requisite subjects, the Faculty reserves the right to require the student to make up such deficiencies.

Applicants seeking advanced standing should arrange to have transcripts of their previous college records forwarded with their initial inquiry. Students admitted to advanced standing are not eligible for placement at co-operative work until they have completed a full year of academic work at the University.

### *Entrance Examinations*

Students who are deficient in required units for admission may remove these deficiencies by examination. Such examinations are held at the University unless special arrangements are made with the Department of Admissions to administer them elsewhere.

Students are advised to take such examinations on the earliest possible date in order that any deficiencies which they fail to clear may be made up in time to permit registration with the desired class and division.

The time of examinations is as follows:

10:00 A.M. to 12:00 M.  
1:00 P.M. to 3:00 P.M.

During the current year examinations will be given on the following days: June 3, 1942; September 3, 1942. All other examinations will be given by special assignment.



## Graduation Requirements

THE College of Engineering offers five-year curricula, conducted on the co-operative plan, leading to the following degrees:

- I. Bachelor of Science in Civil Engineering
- II. Bachelor of Science in Mechanical Engineering\*
- III. Bachelor of Science in Electrical Engineering
- IV. Bachelor of Science in Chemical Engineering
- V. Bachelor of Science in Industrial Engineering

These curricula are described in the following pages. Since the first year is the same for all engineering students, final choice of curriculum need not be made until the beginning of the second year.

Candidates for the Bachelor of Science degree must complete all of the prescribed work of the curriculum in which they seek to qualify, together with ten additional semester hours of credit in elective subjects of a liberal nature. This makes a minimum of 147 semester hours required for the degree. A minimum of 125 weeks of college attendance is needed to fulfill this requirement. Students who undertake co-operative work assignments must also meet the requirements of the Department of Co-operative Work before they become eligible for their degrees.

No student transferring from another college or university is eligible to receive the S.B. degree until he has completed at least one academic year at Northeastern immediately preceding his graduation.

Any student who fails to show a satisfactory standard of general efficiency in his professional field may be required to demonstrate his qualifications for the degree by taking such additional work as the faculty may prescribe. If he is clearly unable to meet the accepted standard of attainment, he may be required to withdraw from the University.

### *Graduation With Honor*

Candidates who have achieved distinctly superior attainment in their academic work will be graduated with honor. Upon special vote of the faculty a limited number of this group may be graduated with high honor or with highest honor. Students must have been in attendance at the University at least three years before they may become eligible for honors at graduation.

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\*Includes options in Aeronautical Engineering and Air Conditioning Engineering.



### *Thesis Option*

Theses are not required of candidates for the degree of Bachelor of Science. Students who show special aptitude for thesis work, however, may be permitted to substitute an appropriate thesis for equivalent work in class. The nature of thesis work is described on page 121.

# Engineering Curricula

## I. Civil Engineering

THE field of civil engineering has to do with the planning and building of all kinds of structures and public works. None of the structures of civil engineers lend themselves to quantity production in a factory. Not only are civil engineering works designed to fit a single location, but ordinarily their value is dependent upon their ability to resist forces tending to move them.

Civil engineering is as old as civilization itself, and until recent times, it embraced all phases of engineering except those of a military character. Today its major branches include topographical, municipal, railroad, highway, structural, hydraulic, and sanitary engineering. It covers land surveying, the building of railroads, harbors, docks, and similar structures, the construction of sewers, waterworks, streets, and highways, the design and construction of bridges, buildings, walls, foundations, and all fixed structures.

Because civil engineering covers such a broad field, it is not possible to become expert in all its branches. All of these, however, rest upon a relatively compact body of principles, and broadly speaking, it may be said that the civil engineer deals largely with accurate descriptions of locations (surveys) and with applications of the mechanics of resistance to motion (statics).

Since the first step in every civil engineering project involves accurate measurement of the surface features of the land, of the nature of the soil, and of the character of the underlying rock, the study of surveying and related subjects occupies a large place in the civil engineering curriculum. And since the primary consideration in designing any structure is to make certain that it will withstand safely any forces to which it may be subjected, the mechanics of static bodies, strength of materials, and theory of structures are studied in detail. The curriculum is thus intended to prepare the young civil engineer to take up the work of design and construction of structures, to solve the problems of water supply and waste disposal in urban areas, and to undertake intelligently the supervision of work in allied fields of engineering and in general contracting.

Upon graduation, the young engineer may expect a period of apprenticeship either in the field, surveying and plotting, or in the office, over the drafting board. As he gains experience, however, he will likely find himself entrusted with greater responsibilities in actual design and supervision of construction. If he prefers a roving existence, his ambition should be directed toward private fields; if a stable home and community life is more appealing, opportunity is probably greater in the public service of the Federal Government and the various states and municipalities.

## I. Civil Engineering

FIRST TERM			SECOND TERM		
Course No.	Course	Semester Hours	Course No.	Course	Semester Hours
<i>First Year</i>					
Ch 1 or Ch 3	General Chemistry	4	Ch 2 or Ch 4	General Chemistry	4
D 1	Graphics I.....	3	D 2	Graphics II.....	3
E 1	English I.....	3	E 2	English I.....	3
M 1	Algebra.....	3			
M 3	Trigonometry.....	2	M 4	Analytic Geometry.....	5
P 1	Physics I.....	3	P 2	Physics I.....	3
PE 1	Hygiene.....	1		Orientation.....	0
	Physical Training.....	0		Physical Training.....	0
		<u>19</u>			<u>18</u>
<i>Second Year</i>					
CI 3	Surveying I.....	1½	CI 4	Surveying II.....	2½
CI 5	Surveying I, F & P....	1	CI 6	Surveying II, F & P....	1
M 5	Differential Calculus....	3	M 6	Integral Calculus.....	3
P 3	Physics II.....	2	P 4	Physics II.....	2
P 5	Physics Laboratory.....	1	P 6	Physics Laboratory.....	1
EL 5	Electrical Machinery...	4	ME 20	Applied Mechanics....	3
		<u>12½</u>			<u>12½</u>
<i>Third Year</i>					
CI 7	Surveying III.....	2	CI 8	Surveying IV.....	2
CI 9	Surveying III, F & P....	1	CI 10	Surveying IV, F & P....	1
CI 11	Hydraulics.....	2½	CI 12	Hydraulics.....	2
Ec 21	Economics.....	2	Ec 22	Economics.....	2
ME 21	Applied Mechanics.....	3	ME 22	Strength of Materials... 3	
ME 35	Heat Engineering.....	2	ME 36	Heat Engineering.....	2½
		<u>12½</u>			<u>12½</u>
<i>Fourth Year</i>					
CI 15	Theory of Structures... 3		CI 16	Theory of Structures... 3	
CI 21	Sanitary Engineering... 2		CI 22	Sanitary Engineering... 2	
Gy 1	Geology.....	2	Gy 2	Geology.....	2
ME 23	Strength of Materials... 2		ME 24	Advanced Mechanics... 2	
ME 69	Testing Materials Lab... 1½		ME 70	Testing Materials Lab... 1½	
S 1	Sociology.....	2	S 2	Sociology.....	2
		<u>12½</u>			<u>12½</u>
<i>Fifth Year</i>					
C 7	Engineering Conference ½		C 8	Engineering Conference ½	
CI 23	Engineering Structures.. 3		CI 24	Engineering Structures.. 3	
CI 25	Concrete.....	2	CI 26	Concrete.....	2
CI 29	Design of Structures... 3		CI 30	Design of Structures... 3	
CI 31	Highway Engineering... 2		CI 32	Highway Engineering... 2	
IN 5	Industrial Management I 2		IN 6	Industrial Management II 2	
		<u>12½</u>			<u>12½</u>

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 147 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period at college during any upper-class year, or in two summer terms.

## II. *Mechanical Engineering*

The field of mechanical engineering is concerned with the harnessing of our power resources by means of machinery to perform useful work. With the increasing mechanization of all industry which has taken place since the industrial revolution a century ago, the field has so broadened as to include all lines of industry.

In contrast to the civil engineer who deals primarily with static forces, the mechanical engineer is more concerned with the mechanics of motion or kinetics. And because moving parts require constant care and adjustment, the mechanical engineer has the task not only of designing and installing complicated machinery but also of operating it efficiently after it has been installed.

Among the major branches of mechanical engineering are included combustion or power production engineering, machine and machine-tool design, railway mechanical engineering, automotive engineering, aeronautical engineering, refrigerating engineering, and air conditioning engineering. The construction and operation of furnaces, boilers, and engines, the design of all kinds of machinery from pocket watches to steel mills, the construction and operation of railway and other transportation equipment including automobiles and airplanes, and even control of atmospheric conditions by means of heating, ventilating, and refrigerating equipment, all fall in this field.

Since machinery is so predominantly the concern of the mechanical engineer, the program of study is designed to give the student considerable training in the principles underlying the design and operation of engines, power transmission devices, machine tools, and other machinery. This, of course, implies a thorough study of the physical laws concerning motion and transfer of energy. Applied mechanics and thermodynamics occupy a prominent place in the curriculum. The program of instruction thus gives the student a broad foundation in those fundamental subjects essential to all engineering practice, and in the senior year, provides opportunity for limited specialization by means of options in aeronautics and air conditioning in addition to the general course.

For those students desiring to specialize in the field of industrial management, attention is called to the curriculum in industrial engineering, the basic training of which is essentially the same as that in mechanical engineering.

The graduate mechanical engineer generally finds employment in an industrial plant, either in design and research or in plant operation and maintenance. And if his abilities lie in that direction, he frequently is entrusted after a time with greater and greater responsibility for the successful management of the enterprise.



## II. Mechanical Engineering

FIRST TERM			SECOND TERM		
Course No.	Course	Semester Hours	Course No.	Course	Semester Hours
<i>First Year</i>					
Ch 1 or Ch 3	General Chemistry	4	Ch 2 or Ch 4	General Chemistry	4
D 1	Graphics I.....	3	D 2	Graphics II.....	3
E 1	English I.....	3	E 2	English I.....	3
M 1	Algebra.....	3			
M 3	Trigonometry.....	2	M 4	Analytic Geometry.....	5
P 1	Physics I.....	3	P 2	Physics I.....	3
PE 1	Hygiene.....	1		Orientation.....	0
	Physical Training....	0		Physical Training.....	0
		19			18
<i>Second Year</i>					
EL 5	Electrical Machinery ...	4	D 4.	Machine Drawing.....	2
IN 3	Production Processes I..	2½	IN 4	Production Processes II..	1½
M 5	Differential Calculus....	3	M 6	Integral Calculus.....	3
P 3	Physics II.....	2	P 4	Physics II.....	2
P 5	Physics Laboratory.....	1	P 6	Physics Laboratory.....	1
			ME 20	Applied Mechanics ....	3
		12½			12½
<i>Third Year</i>					
CI 11	Hydraulics.....	2½	CI 12	Hydraulics.....	2
Ec 21	Economics.....	2	Ec 22	Economics.....	2
ME 1	Mechanism.....	3	EL 6	Electrical Measurements	2½
ME 21	Applied Mechanics.....	3	ME 22	Strength of Materials...	3
ME 29	Heat Engineering.....	2	ME 30	Heat Engineering.....	3
		12½			12½
<i>Fourth Year</i>					
IN 5	Industrial Management I	2	IN 6	Industrial Management II	2
ME 23	Strength of Materials...	2	ME 24	Advanced Mechanics...	2
ME 31	Heat Engineering.....	2½	ME 32	Heat Engineering.....	2½
ME 61	Mechanical Eng. Lab...	2	ME 62	Mechanical Eng. Lab...	2
ME 27	Metallography.....	2	{ ME 42 Heating and Air Cond.		
			or ME 40 Aerodynamics.	2	
S 1	Sociology .....	2	S 2	Sociology.....	2
		12½			12½
<i>Fifth Year</i>					
C 7	Engineering Conference	½	C 8	Engineering Conference	½
IN 21	Contracts.....	2	IN 16	Personnel.....	2
ME 51	Machine Design.....	3	ME 52	Machine Design.....	3
ME 63	Mechanical Eng. Lab...	2½	ME 44	Power Plant Eng.....	2½
	Professional Electives...	4½		Professional Electives...	4½
		12½			12½
<i>Electives:</i>			<i>Electives:</i>		
ME 15	Industrial Plants.....	2½	ME 16	Industrial Plants.....	2½
ME 33	Refrigeration.....	2	ME 34	Steam Turbines.....	2
ME 37	Diesel Engines.....	2	ME 38	Diesel Laboratory.....	2
ME 45	Air Cond. Design I....	2½	ME 46	Air Cond. Design II....	2½
ME 73	Aircraft Structures.....	2	ME 74	Aeronautical Lab.....	2
ME 39	Engine Dynamics.....	2½	ME 48	Air Conditioning Lab...	2
			ME 54	Diesel Engine Design ...	2½
			ME 76	Aircraft Engine Design .	2½

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 147 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period at college during any upper-class year, or in two summer terms.

### III. *Electrical Engineering*

Electrical engineering is still comparatively new; it was barely two generations ago that Thomas Edison built the first central electric power station in New York City, and it was only a generation ago that the radio made its first appearance. In consequence, we find this branch of engineering more closely related to research in pure science than are the older branches of civil and mechanical engineering. Moreover, the tremendous developments of the past decade in theoretical physics have been largely in areas closely related to electrical engineering so that today greater opportunities for intellectual pioneering appear to exist in this field of engineering than in other branches of the profession.

The electrical industry and the field of electrical engineering are usually divided into two main branches, one having to do with electrical power and the other, communications. The power group deals principally with large equipment and apparatus employing heavy currents; the communications group handles smaller more delicate equipment employing small or even minute currents. Electrical engineering thus embraces the generation, transmission, and distribution of electricity for light and power purposes, the operation of electric railways, the design, construction, and operation of all types of electrical equipment including telephone, telegraph, and radio apparatus as well as lamps, motors, and household appliances. In addition, the field of illuminating engineering having to do with the problems of proper light intensities, has in recent years assumed increasing importance.

Since electricity is without material embodiment and can be treated only by mathematical reasoning, the electrical engineer is frequently required to go into higher mathematics seldom used in other fields. It is also absolutely essential that the electrical engineer who hopes to make a success of his work be able to grasp readily and absorb effectively the meaning and content of the many scientific papers having to do with research in this field. For these reasons, the program of study in electrical engineering includes more work in the pure sciences of mathematics and physics than do the other courses, as well as a solid grounding in engineering fundamentals. This is followed by a thorough study of electrical theory and its applications in the power, high voltage, and electronics fields.

The profession of electrical engineering affords a wide diversification of employment opportunities. If one is research-minded, opportunity to develop one's talents may be found in one of the great laboratories; if one is more interested in plant problems, opportunity can be found in the manufacturing or operating organizations; and if one is sales-minded he may find a career as a sales engineer.

III. *Electrical Engineering*

FIRST TERM			SECOND TERM		
Course No.	Course	Semester Hours	Course No.	Course	Semester Hours
<i>First Year</i>					
Ch 1 or Ch 3	General Chemistry	4	Ch 2 or Ch 4	General Chemistry	4
D 1	Graphics I.....	3	D 2	Graphics II.....	3
E 1	English I.....	3	E 2	English I.....	3
M 1	Algebra.....	3			
M 3	Trigonometry.....	2	M 4	Analytic Geometry.....	5
P 1	Physics I.....	3	P 2	Physics I.....	3
PE 1	Hygiene.....	1		Orientation.....	0
	Physical Training.....	0		Physical Training.....	0
		19			18
<i>Second Year</i>					
EL 1	Electrical Eng. I.....	1	EL 2	Electrical Eng. I.....	1
IN 3	Production Processes I..	2½	IN 4	Production Processes II	1½
M 5	Differential Calculus ...	3	M 6	Integral Calculus.....	3
P 3	Physics II.....	2	P 4	Physics II.....	2
P 7	Physics Laboratory.....	2	P 8	Physics Laboratory.....	2
D 3	Engineering Drawing ...	2	ME 20	Applied Mechanics.....	3
		12½			12½
<i>Third Year</i>					
Ec 21	Economics.....	2	Ec 22	Economics.....	2
EL 9	Electrical Eng. II.....	1½	EL 10	Electrical Eng. II.....	2
EL 11	Electrical Eng. Lab.....	1	EL 12	Electrical Eng. Lab.....	1
EL 13	Elec. Measurements I..	2½	EL 14	Elec. Measurements II..	2
ME 21	Applied Mechanics.....	3	ME 22	Strength of Materials... 3	
CI 11	Hydraulics.....	2½	M 7	Differential Equations ..	2½
		12½			12½
<i>Fourth Year</i>					
EL 17	Electrical Eng. III.....	2	EL 18	Electrical Eng. III.....	2
EL 19	Electrical Testing Lab... 2		EL 20	Electrical Testing Lab... 2	
EL 21	Electrophysics.....	1	EL 22	Electrophysics.....	2
EL 23	Electrical Meas. Lab.... 2		EL 24	Adv. Elec. Meas. Lab... 2	
ME 35	Heat Engineering.....	2	ME 36	Heat Engineering.....	2½
ME 69	Testing Materials Lab. . 1½				
S 1	Sociology.....	2	S 2	Sociology.....	2
		12½			12½
<i>Fifth Year</i>					
C 7	Engineering Conference ½		C 8	Engineering Conference ½	
EL 25	Electrical Eng. IV..... 3		EL 26	Electrical Eng. IV..... 3	
EL 27	Adv. Elec. Eng. Lab.... 2		EL 28	Adv. Elec. Eng. Lab.... 2	
EL 29	Electrical Eng. V-A..... 2½		EL 30	Electrical Eng. V-A..... 2½	
EL 31	Elec. Eng. V-B..... 2½		EL 32	Electrical Eng. V-B..... 2½	
EL 33	Adv. Exp. Investigations 2		EL 34	Adv. Exp. Investigations 2	
		12½			12½

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 147 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period at college during any upper-class year, or in two summer terms.



## IV. *Chemical Engineering*

The field of chemical engineering is relatively new. It has grown out of the discoveries of the chemical laboratories which have served as a foundation for a great many new industries whose production processes involve chemical as well as physical changes. Petroleum refining, coal carbonization, manufacture of rayon and cellophane, and hundreds of other industries require men trained in chemistry as well as in engineering. Many older industries such as foods, textiles, and leather are also employing chemical engineers.

The chemical engineer has been defined as a "professional man experienced in the design, construction, and operation of plants in which materials undergo chemical and physical change." It is the duty of the chemical engineer to cut the costs, increase production, and improve the quality of the products in the industry.

The chemical engineer must possess a working knowledge of the fundamental sciences, he must understand and know how to work with men, and he must recognize in his work the "correct appraisal of values and costs." In addition, he must possess the ability to apply his knowledge to the development and operation of chemical processes and plants.

In addition to the fundamental courses in chemistry, mathematics, and physics required of all engineering students, a considerable amount of time is devoted to more advanced work in chemistry as a foundation for the study of chemical technology. Instruction in the elements of mechanical and electrical engineering also gives the student a fairly broad engineering background upon which to base his study of chemical engineering unit operations. Courses of a more liberal nature are included in the curriculum in order that the student may broaden his educational background. Since the field of chemical engineering is so varied, the curriculum has been designed to give the student a broad training rather than a specialized training in one specific industry. It is believed that this training will enable the student readily to acclimate himself to whatever industry he chooses to enter.

Because of the complex nature of many chemical processes and because of the difficulty of translating laboratory results into full-scale plant operations, there has developed in many chemical plants the so-called semi-works or pilot plant. Here new processes developed by the chemists in the research laboratory are put to the test of actual plant conditions on a small scale. And it is here that the young chemical engineer often finds himself upon graduation. If he is able to understand the chemist on the one side and the plant operator on the other, and if he is technically competent as well, he will soon find opportunity for advancement either in one of the technical branches of the industry, such as design, development, research, and production, or in the sales and management fields in which chemical engineering is essential.



## IV. Chemical Engineering

FIRST TERM			SECOND TERM		
Course No.	Course	Semester Hours	Course No.	Course	Semester Hours
<i>First Year</i>					
Ch 1 or Ch 3	General Chemistry	4	Ch 2 or Ch 4	General Chemistry	4
D 1	Graphics I.....	3	D 2	Graphics II.....	3
E 1	English I.....	3	E 2	English I.....	3
M 1	Algebra.....	3			
M 3	Trigonometry.....	2	M 4	Analytic Geometry.....	5
P 1	Physics I.....	3	P 2	Physics I.....	3
	Physical Training.....	0		Physical Training.....	0
PE 1	Hygiene.....	1		Orientation.....	0
		<u>19</u>			<u>18</u>
<i>Second Year</i>					
Ch 9	Qualitative Analysis....	3	Ch 12	Quant. Analysis.....	2
Ch 11	Qual. Analysis Lab....	2½	Ch 14	Quant. Analysis Lab....	1½
Ch 51	Sources of Information..	1	ME 20	Applied Mechanics.....	3
M 5	Differential Calculus....	3	M 6	Integral Calculus.....	3
P 3	Physics II.....	2	P 4	Physics II.....	2
P 5	Physics Laboratory.....	1	P 6	Physics Laboratory.....	1
		<u>12½</u>			<u>12½</u>
<i>Third Year</i>					
Ch 13	Quantitative Analysis..	2	Ch 40	Physical Chemistry.....	2½
Ch 17	Quant. Analysis Lab....	1	ChE 2	Ind. Stoichiometry.....	2
ChE 1	Flow of Fluids.....	2	Ec 22	Economics.....	2
Ec 21	Economics.....	2	ME 22	Strength of Materials... 3	
ME 21	Applied Mechanics.....	3	ME 30	Heat Engineering.....	3
M 7	Differential Equations..	2½			
		<u>12½</u>			<u>12½</u>
<i>Fourth Year</i>					
Ch 31	Organic Chemistry.....	2	Ch 32	Organic Chemistry.....	2
Ch 33	Organic Chem. Lab....	1	Ch 34	Organic Chem. Lab....	1
Ch 45	Physical Chemistry.....	3	Ch 46	Physical Chemistry.....	3
ChE 3	Unit Operations.....	3	ChE 4	Unit Operations.....	3
ChE 5	Unit Operations Lab....	1½	ChE 6	Unit Operations Lab....	1½
S 1	Sociology.....	2	S 2	Sociology.....	2
		<u>12½</u>			<u>12½</u>
<i>Fifth Year</i>					
C 7	Engineering Conference.	½	C 8	Engineering Conference.	½
Ch 35	Org. Chemistry.....	2			
Ch 39	Org. Chem. Lab.....	1	ChE 8	Organic Chem. Tech... 2	
ChE 7	Inorganic Chem. Tech... 2		ChE 10	Chemical Eng. Projects.. 4	
ChE 9	Chemical Proc. Lab.... 3		ChE 12	Engineering Materials... 2	
ChE 11	Chem. Eng. Thermody- namics.....	2			
IN 5	Indus. Management I... 2		EL 5	Elec. Machinery.....	4
		<u>12½</u>			<u>12½</u>

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 147 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period at college during any upper-class year, or in two summer terms.

## V. *Industrial Engineering*

With the growth of large corporations the problems of direction, supervision, and co-ordination of the various parts of a given enterprise have demanded more competent and better trained managers. About fifty years ago, Frederick W. Taylor undertook to apply to the problems of industrial management what we now call "the scientific method" or "the engineering approach". He reasoned that it was management's business to know what constituted a proper day's work and that the way to get the facts was through research and experiment on a scientific basis. He defined "scientific management" not as any device or scheme or gadget, but as a new outlook—a new viewpoint based upon a solid foundation of fact. The methods employed by Taylor and by those who came after him have undergone considerable modification, but the concept of scientific management which he formulated has gained wider and wider recognition during the intervening years from both employers and employees.

This growing recognition of the value of a scientific approach to the problems of industrial management early created a demand for men trained in engineering and science, who possessed a knowledge of business as well, to assume positions of administrative responsibility in industry. To meet this demand, courses were established in many engineering colleges to provide a thorough training in engineering fundamentals together with a specialized training in business administration which would prepare the students for managerial responsibilities in technical industries. These curricula are variously entitled industrial engineering, administrative engineering or engineering administration, but all are designed to lead ultimately to positions of administrative or executive responsibility, rather than to positions which involve highly specialized engineering responsibility.

The curriculum in industrial engineering, then, provides a course of study which is essentially the same as that for mechanical engineering in the first three years. In the last two years, however, many of the advanced engineering courses are replaced by courses in business management.

Upon graduation, the young industrial engineer may find his way into plant work perhaps in the methods department, he may prefer office work and enter the accounting department, or he may incline toward sales engineering work and after a period in the factory find himself in the sales department.

There is also opportunity for the experienced industrial engineer in the consulting field. Upon becoming especially skilled in the technique of management, the consulting industrial engineer is called in by industry for advice upon the installation and maintenance of sound management principles and policies, and to assist in the reorganization of enterprises which have failed.

## V. Industrial Engineering

FIRST TERM			SECOND TERM		
Course No.	Course	Semester Hours	Course No.	Course	Semester Hours
<i>First Year</i>					
Ch 1 or Ch 3	General Chemistry	4	Ch 2 or Ch 4	Inorganic Chemistry	4
D 1	Graphics I.....	3	D 2	Graphics II.....	3
E 1	English I.....	3	E 2	English I.....	3
M 1	Algebra.....	3			
M 3	Trigonometry.....	2	M 4	Analytic Geometry.....	5
P 1	Physics I.....	3	P 2	Physics I.....	3
PE 1	Hygiene.....	1		Orientation.....	0
	Physical Training.....	0		Physical Training.....	0
		<u>19</u>			<u>18</u>
<i>Second Year</i>					
EL 5	Electrical Machinery ...	4	D 4	Machine Drawing.....	2
IN 3	Production Processes I..	2½	IN 4	Production Processes II	1½
M 5	Differential Calculus....	3	M 6	Integral Calculus.....	3
P 3	Physics II.....	2	P 4	Physics II.....	2
P 5	Physics Laboratory.....	1	P 6	Physics Laboratory.....	1
			ME 20	Applied Mechanics ....	3
		<u>12½</u>			<u>12½</u>
<i>Third Year</i>					
CI 11	Hydraulics.....	2½	CI 12	Hydraulics.....	2
Ec 21	Economics.....	2	Ec 22	Economics.....	2
ME 1	Mechanism.....	3	EL 6	Electrical Measurements	2½
ME 21	Applied Mechanics ....	3	ME 22	Strength of Materials. .	3
ME 29	Heat Engineering.....	2	ME 30	Heat Engineering.....	3
		<u>12½</u>			<u>12½</u>
<i>Fourth Year</i>					
IN 5	Industrial Management I	2	IN 6	Indust. Management II .	2
IN 7	Industrial Accounting..	2	IN 8	Industrial Accounting..	2
IN 23	Statistics.....	2½	IN 24	Statistics.....	2½
ME 23	Strength of Materials. .	2	ME 42	Heating and Air Cond..	2
ME 61	Mechanical Eng. Lab...	2	ME 62	Mechanical Eng. Lab...	2
S 1	Sociology.....	2	S 2	Sociology.....	2
		<u>12½</u>			<u>12½</u>
<i>Fifth Year</i>					
C 7	Engineering Conference	½	C 8	Engineering Conference	½
IN 9	Cost Accounting.....	2½	IN 10	Cost Accounting.....	2½
IN 11	Methods Engineering...	2½	IN 14	Industrial Finance.....	2½
IN 15	Sales Engineering.....	2½	IN 16	Personnel Adm.....	2
IN 21	Contracts.....	2	IN 18	Sales Eng. Problems....	2½
IN 25	Industrial Plants.....	2½	IN 26	Industrial Plants.....	2½
		<u>12½</u>			<u>12½</u>

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 147 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period at college during any upper-class year, or in two summer terms.



## *Synopses of Courses of Instruction\**

### *Co-ordination*

#### *C 7 Engineering Conference*

This course is designed to bring about analytical thinking and systematic planning of the "after-graduation-employment" problem. It is conducted as an open discussion class by the Department of Co-operative Work. Each Co-ordinator has in his class those students who have been placed and supervised on co-operative work by him. Each student analyzes and applies to himself as the "product" the fundamental principles of merchandising. Prominent men who are leaders in the fields of employment counseling, business, or engineering present the employers' viewpoint. Thus the graduating seniors are brought face to face during the year with one of the most important and perplexing problems of life, namely, how to "sell their services", thereby aiming to bring a co-ordinated training of theory and practice to a logical conclusion.

*½ semester hour credit*

#### *C 8 Engineering Conference*

This course is the sequel to C 7 and consists of the practical application of the techniques of job-getting which have been analyzed and discussed in that course. It is conducted on a conference rather than on a class basis, the major portion of the time being devoted to the planning and writing of letters to and securing interviews with prospective employers. It is intended that this course will culminate in the attainment by each student of his after-graduation job.

*½ semester hour credit*

## *Chemistry*

### *Ch 1 General Chemistry*

A course designed for those who have had chemistry before entering college. The fundamental ideas of matter and energy; the properties of gases, liquids, and solids; molecular weights; equations, atomic structure, classification of the elements; ionic reactions; the chemistry of the non-metals, and radio activity are among the topics which are covered in the course. Two lectures, one recitation, and a three-hour laboratory period comprise the weekly schedule of instruction.

*4 semester hour credits*

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\*For definition of pre-requisite and preparatory courses, see page 123.



### Ch 2 General Chemistry

A continuation of Ch 1 General Chemistry. Modern ideas covering the theory of solutions of electrolytes are discussed together with experimental facts. The chemistry of the metals is covered thoroughly, and time is devoted to an introduction to organic chemistry. The latter part of the course is given to qualitative analysis with particular emphasis on the laboratory work. The plan of instruction is identical with that of Ch 1.

*Preparation: Ch 1*

*4 semester hour credits*

### Ch 3 General Chemistry

A course intended for those who have not had chemistry in high school. The content is similar to that of Ch 1, but the treatment is such that no prior knowledge of chemistry is necessary. Two lectures, one recitation, and a three-hour laboratory period comprise the weekly schedule of instruction.

*4 semester hour credits*

### Ch 4 General Chemistry

A continuation of Ch 3 with a course content and schedule of instruction similar to Ch 2.

*Preparation: Ch 3*

*4 semester hour credits*

### Ch 9 Qualitative Analysis

The object of this course is to give the student knowledge of the various fundamental qualitative laws and principles. A portion of the time is devoted to the formulation of numerical terms which are essential to the understanding of the mass action law, ionic equilibria, solubility product, hydrolysis, and redox constants. The use of the newer spot tests is stressed and where possible their reactions explained. Whenever necessary, lectures demonstrating the various semi-micro techniques are given, as well as those designed to illustrate more fundamental properties of solutions.

*Pre-requisite: Ch 1, Ch 2 or Ch 3, Ch 4*

*3 semester hour credits*

### Ch 11 Qualitative Analysis Laboratory

This course, which is carried out on a semi-micro scale, applies the material covered in Ch 9 to actual problems. After some preliminary experiments certain procedures are combined and the separations and identifications made on both known and unknown solutions. Finally these are combined into a complete, systematic

scheme which is applied to artificially prepared mixtures and industrial materials. Careful manipulations, thoroughness in observation, and accuracy in arriving at conclusions are expected of each student.

*Pre-requisite:* Ch 1, 2 or Ch 3, 4  
*Must be taken concurrently:* Ch 9

2½ semester hour credits

### Ch 12 Quantitative Analysis

It is the purpose of this course to give to the student a realization of the scientific development of quantitative methods. Each of the major operations such as weighing, measurement of volumes, titration, filtration, ignition, and combustion, is considered from the standpoint of the theoretical principles involved, and with due consideration of the manipulative technique necessary.

This is followed by the combination of these operations and their application to actual analysis including a comprehensive study of volumetric methods and of the more elementary parts of gravimetric analysis.

As the correct calculation of analytical results is of no less importance than the actual procedures of analysis, a number of problems form a very important part of the course.

*Pre-requisite:* Ch 1, 2 or Ch 3, 4  
*Preparation:* Ch 9  
*Must be taken concurrently:* Ch 14

2 semester hour credits

### Ch 13 Quantitative Analysis

This course, a continuation of Ch 12, is similarly conducted. After consideration of the more advanced parts of gravimetric analysis and of systematic mineral procedures, the remainder of the course consists of a critical discussion of common technical methods, including the standard ones for the analysis of steel, non-ferrous alloys, fuels, oils, gas, water, fertilizers, and foods.

*Pre-requisite:* Ch 1, 2 or Ch 3, 4  
*Preparation:* Ch 12  
*Must be taken concurrently:* Ch 17

2 semester hour credits

### Ch 14 Quantitative Analysis Laboratory

This is a laboratory course intended to illustrate by actual use the various analytical methods considered in Ch 12. After certain preliminary experiments designed to acquaint the student with the apparatus used, volumetric analysis (including acidimetry and alkalimetry), oxidation, reduction, and precipitation methods are taken up. This is followed by simple gravimetric analysis.

*Pre-requisite:* Ch 1, 2 or Ch 3, 4  
*Preparation:* Ch 11  
*Must be taken concurrently:* Ch 12

1½ semester hour credits

### Ch 17 Quantitative Analysis Laboratory

This course includes not only the usual illustrative gravimetric determinations but also electrolytic, electrometric, combustion, and optical methods. In the latter half of the course actual industrial methods are used so that at its completion, the student should be able to perform satisfactorily any ordinary analysis.

*Pre-requisite:* Ch 1, 2 or Ch 3, 4

*1 semester hour credit*

*Preparation:* Ch 14

*Must be taken concurrently:* Ch 13

### Ch 31 Organic Chemistry

A study of the basic principles of the aliphatic organic compounds. The resemblance of classes is stressed and emphasis is placed on genetic charts. The industrial significance of the subject is discussed to show the practical nature of organic chemistry.

*Pre-requisite:* Ch 1, 2 or Ch 3, 4

*2 semester hour credits*

*Preparation:* Ch 40

*Must be taken concurrently:* Ch 33

### Ch 32 Organic Chemistry

A continuation of Ch 31 dealing with the preparation and characteristic reactions of the aromatic organic compounds. Special attention is given to polymerization, diazotization, dyes, and the use of catalyst, nitration, and sulfonation.

A few of the more important heterocyclic compounds are studied.

*Preparation:* Ch 31

*2 semester hour credits*

*Must be taken concurrently:* Ch 34

### Ch 33 Organic Chemistry Laboratory

Preparations and reactions designed to teach the laboratory technique involved in organic chemistry. The method of keeping notes on the work performed and reactions involved is stressed.

*Pre-requisite:* Ch 1, 2 or Ch 3, 4

*1 semester hour credit*

*Preparation:* Ch 40

*Must be taken concurrently:* Ch 31

### Ch 34 Organic Chemistry Laboratory

This is a continuation of Ch 33. The preparations in this course serve to acquaint the student with such types of chemical reactions as sulfonation, the Grignard reaction, the Perkins reaction,

Skraup's synthesis, the Friedal-Crafts' reaction, and the preparation of dyes.

In addition to the manipulation techniques taught in Ch 33, this course introduces the use of vacuum distillations, fractional crystallization, and separations by physical and chemical means.

*Preparation:* Ch 33

*1 semester hour credit*

*Must be taken concurrently:* Ch 32

### Ch 35 Organic Chemistry

A continuation of Ch 32 and includes a study of the preparation and reactions of heterocyclic and alicyclic compounds.

*Preparation:* Ch 32

*2 semester hour credits*

*Must be taken concurrently:* Ch 39

### Ch 39 Organic Chemistry Laboratory

The purpose of this course is to familiarize the student with the chemical and physical tests used in qualitative organic analysis. A series of experiments, based on the classification of reactions of organic compounds, serves as a basis for the examination of simple liquid and simple solid compounds and the preparation of suitable derivatives of them.

*Preparation:* Ch 34

*1 semester hour credit*

*Must be taken concurrently:* Ch 35

### Ch 40 Physical Chemistry

This course begins with a short resume of the field of physical chemistry, and its relationship to the other courses in chemistry and chemical engineering. Following this, atomic and molecular weights, and the properties of gases, liquids, solids, ionized, non-ionized, and colloidal solutions are taken up.

*Pre-requisite:* Ch 12, Ch 14

*2½ semester hour credits*

*Preparation:* Ch 13, Ch 17

### Ch 45 Physical Chemistry

A continuation of Ch 40 including a consideration of the following topics: rates of reaction, homogeneous and heterogeneous equilibrium, and thermochemistry.

*Pre-requisite:* Ch 13, Ch 17

*3 semester hour credits*

*Preparation:* Ch 40



### Ch 46 Physical Chemistry

A continuation of Ch 45 including electrical conductance, electrolytic equilibrium, electrolysis, photochemistry and atomic structure.

*Preparation:* Ch 45

*3 semester hour credits*

### Ch 51 Sources of Information

This course is intended to acquaint the chemical student with the constantly increasing volume of scientific literature pertaining to the field of chemistry.

After a brief outline of the entire field of scientific literature, and a description of various methods of library procedure, the various available sources of scientific information are investigated. A series of individual library problems, in which the student is required to apply the information obtained in the classroom, forms a very important part of the course.

*Pre-requisite:* Ch 1, Ch 2 or Ch 3, Ch 4

*1 semester hour credit*

## Chemical Engineering

### ChE 1 Flow of Fluids

A study of methods of determining rates of flow and power consumption of fluids flowing through pipe lines. This course differs from the usual course in hydraulics chiefly in the amount of emphasis placed on the flow of gases and oils.

*Preparation:* P 1

*2 semester hour credits*

### ChE 2 Industrial Stoichiometry

This is essentially a problem course developed around the study of fuels and combustion. Special attention is given to principles underlying the methods of calculation which are of value to the chemical engineer.

*Pre-requisite:* Ch 12

*2 semester hour credits*

*Preparation:* Ch 13

### ChE 3 Unit Operations

This course consists of a study of the mechanical operations peculiar to the chemical industry. Such unit operations as flow of heat, evaporation, and humidity control are considered. Many problems of a practical nature are solved during the course.

*Pre-requisite:* ChE 1

*3 semester hour credits*

*Must be taken concurrently:* ChE 5

### ChE 4 Unit Operations

This is a continuation of ChE 3. The unit operations studied are drying, crushing, separation, filtration, distillation, and gas absorption.

*Pre-requisite:* ChE 2

*3 semester hour credits*

*Preparation:* ChE 3

*Must be taken concurrently:* ChE 6

### ChE 5 Unit Operations Laboratory

This laboratory course is based on the unit operations studied in ChE 3. The squad system is used. Experiments are performed on small-scale plant equipment that has been specially designed or selected for the purpose. Detailed reports are required.

*Must be taken concurrently:* ChE 3

*1½ semester hour credits*

### ChE 6 Unit Operations Laboratory

This is a continuation of ChE 5. Experiments are performed in the unit operations which are being studied simultaneously in ChE 6.

*Must be taken concurrently:* ChE 4

*1½ semester hour credits*

### ChE 7 Inorganic Chemical Technology

A study of the processes and manufacturing methods used in the more important industries based on inorganic chemical technology. Existing material and economic relationships are emphasized. Plant inspection trips and problems pertaining to the industries studied are included.

*Pre-requisite:* Ch 9

*2 semester hour credits*

*Preparation:* ChE 2

### ChE 8 Organic Chemical Technology

The course consists of a study of industrial organic chemical processes. An attempt is made to co-ordinate the fundamental principles of organic synthesis with the requirements of industrial plants. Attention is given to the special features which must be considered in the design and construction of equipment used for the production of industrial organic chemicals.

*Pre-requisite:* ChE 4, Ch 32

*2 semester hour credits*

### ChE 9 Chemical Process Laboratory

This course includes a consideration of the various problems which arise during the evolution of a manufacturing process. The study is begun with a survey of the literature and is continued in the laboratory. Procedures are varied systematically and the effect on the efficiency of the process noted. The principle of economic balance is taken into consideration whenever possible. Small-scale industrial equipment is used to get operating data necessary for the selection or design of large-scale equipment. Reports of progress are required during the course. A report on equipment and operating technique required for large-scale production terminates the course.

*Preparation: ChE 4*

*3 semester hour credits*

### ChE 10 Chemical Engineering Projects

Research problems in chemical engineering and applied chemistry are assigned to students for solution. The course is designed to develop individual initiative and self-reliance. Students qualified by industrial experience are assigned problems suggested by co-operating firms which are worked out under the joint supervision of plant engineers and members of the staff.

*Preparation: ChE 4*

*4 semester hour credits*

### ChE 11 Chemical Engineering Thermodynamics

A study of the fundamental principles of thermodynamics as they apply to chemical engineering. Special attention will be given to high pressure operations because of their vital importance. The usefulness of thermodynamics to the chemical engineer for the purpose of determining properties of materials, energy balances, equilibrium conditions, and in determining the availability of energy, which is the driving force for all of his unit operations, is emphasized.

*Pre-requisite: Ch 46*

*2 semester hour credits*

### ChE 12 Engineering Materials

A study of various materials used in the construction of buildings and the fabrication of engineering equipment where chemistry plays a part. The production and properties of the ferrous and non-ferrous metals and their alloys are considered primarily from the standpoint of resistance to corrosion, erosion and weathering. Particular attention is given to the more recently developed materials of construction and their application in building structures and in fabricating equipment.

*2 semester hour credits*

## *Civil Engineering*

### *CI 3 Surveying I*

The course is divided into two portions, the first of which treats of basic principles such as taping, theory of the transit and use of the transit, theory of the level, care of the level and use of the level.

The second portion deals with closed and random traverses, both the D.M.D. and the co-ordinate methods being used. Particular stress is laid upon having the student use the methods and procedures as outlined by the Massachusetts Land Court.

*Pre-requisite: M 3*

*1½ semester hour credits*

### *CI 4 Surveying II*

This course is a continuation of course CI 3. The applications of leveling are first studied; stressing, differential leveling, double rodged leveling, profile leveling, and the setting of batter boards.

The principles of reconnaissance, preliminary and location surveys, as applied to highway and railroad surveying, are used as an introduction to "route surveying". These are followed by the principles and application of simple, compound, reversed, and vertical curves including sight distances, and areas bounded by circular arcs. Many of the more difficult or complex problems are solved by the use of rectangular co-ordinates (or by the use of right triangles), thus giving a continuation of the co-ordinate method as given in course CI 3. The railroad curve and the highway curve (i.e., the circular arc) are simultaneously studied throughout the course.

*Preparation: CI 3*

*2½ semester hour credits*

### *CI 5 Surveying I, F. & P.*

The course is divided into two equal parts; the first part is devoted entirely to field work, while the second part is devoted entirely to office, or plotting work.

In the field an accurate tape and transit closed traverse is run. The angles are read by repetition. The distances are taped and each traverse point is carefully tied in. The aim is to obtain data for a closed traverse equal to or better than a Class A survey as set forth by the Massachusetts Land Court. Physical features are located from this traverse. The best methods and procedures of taking field notes are emphasized at all times.

In the drafting room the student is required to compute his closed traverse by both the D.M.D. and rectangular co-ordinate methods, to submit an original drawing showing the traverse and



physical features, and to trace this drawing with careful attention to such details as lettering, appearance, and title.

*Pre-requisite: D 1*

*1 semester hour credit*

*Must be taken concurrently: CI 3*

### CI 6 Surveying II, F. & P.

A reconnaissance line is studied and from this a preliminary center line in the form of a random traverse is run. From this preliminary line all the physical features several hundred feet each side of the center line are located. A map is then prepared showing these data. From this map suitable curves are computed and the location of the center line thus determined is staked out in the field.

*Preparation: CI 5*

*1 semester hour credit*

*Must be taken concurrently: CI 4*

### CI 7 Surveying III

This course is a continuation of CI 4. The various field procedures and methods of computation for taking cross sections are studied. Both the average end area method of computing volumes and the prismoidal formulae are taught. The principles and methods used in balancing volumes and constructing and solving mass diagrams are presented.

The spiral or transition curve as applied to railroad and highway location is taken up. In the latter part of this course the fundamentals of railroad track problems are presented.

*Pre-requisite: CI 3, CI 4*

*2 semester hour credits*

### CI 8 Surveying IV

This course consists of lectures and problem work in plane triangulation; Coast and Geodetic leveling; the plane table with its applications to topographic surveying, and the theory of the sextant is also presented with its applications to hydrographic surveying. The use of the transit in studying astronomical surveying problems in azimuth and time, and the computations of geodetic triangulations and the conversion to rectangular coordinates from geodetic are also studied in this course.

*Preparation: CI 7*

*2 semester hour credits*

### CI 9 Surveying III, F. & P.

This is a continuation of course CI 6. A profile of the center line is run and from this a suitable sub-grade profile of this line is obtained. Further field work is undertaken to obtain a complete set

of cross section notes for the whole line, and special emphasis on field notes is made throughout the course.

In the drafting room the volumes and balanced volumes are computed. From these a mass diagram is prepared and a complete earthwork solution is solved by use of the mass diagram and the profile.

*Pre-requisite:* CI 5, CI 6

*1 semester hour credit*

*Must be taken concurrently:* CI 7

### CI 10 Surveying IV, F. & P.

This course is divided nearly equally into two portions—one consisting of field work, and the other drafting room work.

The field work is triangulation, including measurements of base line, measurement of angles by repetition with precise transits or theodolite. A complete plane table map is drawn locating physical features and contours; and some of the more elementary plane table problems such as the intersection, the resection, and the three-point problems are taken up. Precise and Coast and Geodetic leveling are also considered, along with an observation on the sun for time and azimuth and an observation on Polaris for true north.

The drafting room work consists of the preparation of a topographic map, tracing of the topographic map, triangulation computations, and the solution (analytic solution) of such problems as the eccentric and the three point problem.

*Preparation:* CI 9

*1 semester hour credit*

*Must be taken concurrently:* CI 8

### CI 11 Hydraulics I

This course is divided into two parts—the first part which treats with the laws of hydrostatics, and the second part which deals with the laws of hydrokinetics.

Under the topic of hydrostatics the following material is studied: open end U gauges, differential manometers, pressure intensity, total pressures, location of center of pressure (horizontally and vertically), pressures on curved and inclined surfaces, hoop tension and end tension, simple dams, and flotation problems.

The laws of hydrokinetics, including those of the flow of liquids through Venturi meter, orifices, short tubes, pipe lines, and open channels are studied with particular reference to Bernoulli's theorem.

In the hydraulic demonstration laboratory the following demonstrations are made: Venturi meter, orifice meter (submerged orifice), discharge of orifice into the atmosphere, discharge through orifice or short tube under falling head, and trajectory of discharge for either a short tube or an orifice.

*Pre-requisite:* ME 20

*2½ semester hour credits*

*Preparation:* ME 21

### CI 12 *Hydraulics II*

This course is a continuation of course CI 11. Hazen and Williams' formula is developed and from a flow chart of Hazen and Williams' formula, flow through pipe lines, equivalent pipes, and the application to simple grid systems are studied. Rectangular weirs, with and without end contractions and with and without the velocity of approach being considered, are studied. The only other weir emphasized is the V notched or triangular weir. The Cipolletti weir and the proportional weir are discussed.

Dimensional analysis as applied to fluid mechanics is studied so that the student is able dimensionally to evaluate various hydraulic formulae. The flow of fluids, and gases, through closed conduits are considered by the application of Reynolds' number determining whether the flow be laminar or turbulent.

This is followed by the theory and application of the pitot tube as applied to hydraulic problems.

The course concludes with a study of the dynamic action of jets and stricims.

In the hydraulic laboratory the following demonstrations are made: rectangular weirs, triangular weir, pitot tube, and laminar and turbulent flow by Reynolds' number apparatus.

*Preparation: CI 11*

*2 semester hour credits*

### CI 15 *Theory of Structures*

The course comprises lectures and recitation work in the study of the loads, reactions, shears, and moments acting upon statically determinate structures of various kinds such as roofs and bridges. A complete and thorough presentation of the usual methods of determining bar stresses in simple trusses is also undertaken.

All of the foregoing studies are covered in detail by both algebraic and graphic methods.

Following a discussion of roof truss types and loading, the above methods are applied to the complete analysis of a roof truss.

*Pre-requisite: ME 22*

*3 semester hour credits*

*Preparation: M 23*

### CI 16 *Theory of Structures*

A complete study of the function of influence lines in determining the shears, moments, and stresses produced in various types of simple structures by moving load systems both distributed and concentrated. Methods of providing for impact stresses in structures are discussed and analyzed. The material given in CI 15 and also in this course is then summarized by the solution of problems determining the design stresses for several types of bridge structures.

*Preparation: CI 15*

*3 semester hour credits*



### CI 21 Sanitary Engineering I

The course is designed primarily to be a lecture course supplemented by problems involving the following items of water supply engineering, the collection and assimilation of rainfall data; the methods of collection and storage for ground water or surface waters; the preparation of a dam site and the elements of design as applied to masonry and earth filled dams; methods of distributing water for domestic use, manufacturing, and for fire fighting; treatment of water for hardness; treatments of water to provide a palatable and safe water supply free from contamination. Consideration is given also to present day activities in regard to the improvement of water supply apparatus with special emphasis upon costs of installation, cost of apparatus, and total cost as applied to water supply engineering.

*Pre-requisite:* CI 11, CI 12

*2 semester hour credits*

### CI 22 Sanitary Engineering II

This is a companion course to CI 21. It deals with the collection and disposal of sewage and storm water, including the following items: the quantity of sewage to be collected; the sewerage systems for either a separate or a combined system; the surveying and the collection of data in order to prepare plans for the design and the construction of the collection system; and a thorough discussion of the modern methods of treating the sewage and the operation of the sewage disposal plants.

*Preparation:* CI 21

*2 semester hour credits*

### CI 23 Engineering Structures

The work begins with the design of bridge trusses having secondary web systems (including Baltimore and Petit trusses) and trusses with multiple web systems, lateral and portal bracing, transverse bents, viaduct towers and cantilever bridges.

A study is made of slope and deflection with emphasis on the methods of "Moment Area" and "Elastic Weights". The graphical solution of deflections as illustrated by the Williot-Mohr diagram is studied.

*Pre-requisite:* CI 15, CI 16, ME 23

*3 semester hour credits*

### CI 24 Engineering Structures

The course consists of the study of rigid frames and continuous beams. All the customary methods are discussed, including the Three Moment Equation, Least Work, Slope Deflection, and Moment Distribution. The solution of statically indeterminate



problems in continuous beams is obtained by algebraic and graphical methods.

*Preparation: CI 23*

*3 semester hour credits*

### CI 25 Concrete

Concrete as a material of construction is studied in detail, and the principles of reinforced concrete design are learned. Computations and designs are made of rectangular beams, T beams, and girders.

*Pre-requisite: ME 23*

*2 semester hour credits*

### CI 26 Concrete

This course, a continuation of CI 25, covers the design of reinforced concrete columns, footings, retaining walls, and arches. It also includes a discussion of engineering foundations. The topics taken up are sub-surface explorations, pile foundations (both timber and concrete) sheet piles, cofferdams, open and pneumatic caissons, pier foundations in open wells, and bridge piers.

*Preparation: CI 25*

*2 semester hour credits*

### CI 29 Design of Structures

This course consists of instruction in the preparation of working drawings, also the design and detailing of simple structural members in timber and steel.

*Must be taken concurrently: CI 23, CI 25*

*3 semester hour credits*

### CI 30 Design of Structures

A continuation of CI 29, considers the design and detailing of more complex structures and structural parts in timber, steel, and reinforced concrete.

*Preparation: CI 29*

*3 semester hour credits*

*Must be taken concurrently: CI 24, CI 26*

### CI 31 Highway Engineering

The course includes development of modern highways and highway administration, the preparation of the road foundation, drainage, and drainage facilities. The various types of highways and city streets, their location, design, cost, construction, and maintenance are studied. Special consideration is given to the

design and construction of Portland cement and bituminous concrete pavements, the design of street intersections, and the selection of the type of road surface.

*Pre-requisite: CI 7*

*2 semester hour credits*

*Preparation: CI 9*

### *CI 32 Highway Engineering*

This course is a continuation of CI 31, and covers more specific details of design, cost, and construction. The testing of highway materials, soil properties, and classification are studied along with the application of laboratory tests and research to road construction and soil stabilization. Traffic control and surveys, grade separations, and express highways, are also included. The economics of highway transportation and highway grades with their respective cost estimates and plans conclude the course.

*Preparation: CI 31*

*2 semester hour credits*

## *Drawing*

### *D 1 Graphics I*

This course comprises a complete study of shape description in both orthographic and pictorial form. It provides a thorough foundation for the study of working drawings. The work is laid out according to the following divisions: care and use of instruments, lettering, geometric constructions including the conic, involute and cycloidal curves, orthographic projection including multiplanar and axonometric drawing, oblique and perspective projection, technical freehand sketching, development, screw-threads, sectioning, dimensioning, and tracing.

*3 semester hour credits*

### *D 2 Graphics II*

This course comprises a complete study of the theory of projection. It is designed to develop the power to visualize and solve practical problems in spatial relations. In addition to point, line, and plane problems, the course includes a study of mining problems, stresses in framed structures, shadows, solid intersections, developable and warped surfaces.

*Preparation: D 1*

*3 semester hour credits*

### *D 3 Engineering Drawing*

A course similar to D 4 except that it is designed to be of particular value to students of electrical engineering.

*Pre-requisite: D 1*

*2 semester hour credits*

### *D 4 Machine Drawing*

Detail working drawings of machine parts and assembly drawings of simple machines are made in accordance with best commercial practice. Such simple phases of mechanism as are necessary to a complete understanding of machine drawing are included in the course.

*Pre-requisite: D 1*

*2 semester hour credits*

## *English*

### *E 1 English I*

A course in composition with especial emphasis on exposition. Principles of grammar and rhetoric are reviewed rapidly but thoroughly. Contemporary essays are studied both for their value as models and as enrichment of the student's background. Themes on subjects largely drawn from or related to the student's life and study are a weekly requirement.

*3 semester hour credits*

### *E 2 English I*

A continuation of E 1. Toward the end of the term a careful study is made of letter writing.

*Preparation: E 1*

*3 semester hour credits*

## *Economics*

### *Ec 21 Economics*

After an analysis of the main characteristics of our modern economic order, attention is turned to the fundamental economic laws and principles governing the production of economic goods, the organization of business enterprise, money, banking, the business cycle, control of the price level, and international trade. Case material is used freely.

*2 semester hour credits*

### *Ec 22 Economics*

A continuation of Ec 21. The first part of the course deals with the principles of price determination under competitive and monopolistic conditions, and the principles underlying the distribution of wealth and income into wages, interest, and profits. Consideration is then given to the major aspects of the economic problems of agriculture, public utility regulation, labor, consumption, public finance, and economic reform.

*Preparation: Ec 21*

*2 semester hour credits*

## *Electrical Engineering*

### *EL 1 Electrical Engineering I*

This course deals with the fundamental principles of D.C. machines, motional E.M.F., structural parts of machines, armature windings, armature reaction, commutation, subject matter which may be considered common to both generator and motor. In it also are considered the methods of field excitation and the characteristics of the shunt wound generator.

*Pre-requisite: P 2*

*1 semester hour credit*

### *EL 2 Electrical Engineering I*

This course is a continuation of EL 1. It deals with the characteristics of the series and compound-wound generators, and the operating principles and characteristics of D.C. motors, shunt, series and compound both cumulative and differential together with the various methods of speed control.

*Preparation: EL 1*

*1 semester hour credit*

### *EL 5 Electrical Machinery*

This course is concerned with the theory and application of the electrical equipment most often met by practicing engineers. Descriptions of the parts of the machines, their operating characteristics and of their special fields of usefulness are extended chiefly over shunt, series and compound direct current motors and generators, alternators, transformers, synchronous and induction motors. Consideration is given to auxiliary apparatus insofar as necessary to a good understanding of the functioning of the machinery as a whole.

Tests are made on various direct and alternating current machines. The object is to give the students facility in connecting and operating the machines as well as to observe in actual practice the characteristics taken up in the lectures. Outside reports are required to be written up for each experiment.

*Pre-requisite: P 2*

*4 semester hour credits*

### *EL 6 Electrical Measurements*

The course comprises a brief study of measurements in general, and precision measure as applied to electrical measurements in particular. Resistance devices, galvanometers, ammeters, and voltmeters are next discussed, the treatment of other instruments being taken up later in connection with their use. This is followed by a detailed discussion of the methods of measuring various electrical



quantities: resistance, resistivity, conductance; D.C. electromotive force, current, power, and energy; inductance, and magnetic induction. This part of the work involves the students' use of both visual and sound indicating devices. Some consideration is given to the principles and operation of vacuum tubes. Appropriate laboratory experiments are included.

*Pre-requisite: EL 5*

*2½ semester hour credits*

### *EL 9 Electrical Engineering II*

A study of electrostatic fields, force, and potential; magnetic fields; and the energy content of each. The elementary differential equations of circuits containing resistance, inductance, and capacity combinations are solved. Complex algebra as applied to the study of sinusoidal waves concludes the course.

*Pre-requisite: P 2*

*1½ semester hour credits*

### *EL 10 Electrical Engineering II*

A study of single phase alternating currents and circuits, including series, parallel, and series-parallel combinations; Kirchhoff's laws; non-sinusoidal waves; power; and filters.

*Preparation or taken concurrently: M 7*

*2 semester hour credits*

### *EL 11 Electrical Engineering Laboratory*

This is a laboratory course intended to develop a thorough understanding of the operating characteristics of the individual machines studied in courses EL 1 and EL 2, including work and experiments on armature and field resistance measurement, heat runs, connection of D.C. generators, and speed variations in a shunt motor. As it is also the purpose of this course to inculcate correct methods of work and preparation of preliminary and final reports, no definite number of experiments is required, but the utmost emphasis is placed upon the quality of the data, style, and content of the completed reports.

*Pre-requisite: EL 2*

*1 semester hour credit*

### *EL 12 Electrical Engineering Laboratory*

This course continues the approach outlined in EL 11 and consists of experiments on series and compound motors, stray power testing and compound generator characteristics.

*Preparation or taken concurrently: EL 10*

*1 semester hour credit*

### *EL 13 Electrical Measurements I*

This course is designed to acquaint the student with the theory of precision measure as applied to electrical measurement in particular. Some of the subjects covered are theory of measurements, directly and indirectly measured quantities, recording of observations, rules of significant figures, classification of error, law of error, characteristics of error, and laws of average deviation.

Most of the problems studied fall in the following two general classifications: (1) Given the precision measures of the directly measured quantities, to determine the precision measure of the indirectly measured quantity as calculated by the use of engineering equations which apply to measurements work. (2) Given the prescribed precision to be obtained in the indirectly measured quantity, to determine the precision measure of the directly measured components which enter into its calculation.

In this course parts and theory of operation of resistance devices, galvanometers, ammeters, and voltmeters are discussed, the treatment of other instruments being taken up later in connection with their use. This is followed by a detailed discussion of the methods of measuring various electrical quantities: resistance, resistivity, conductance; D.C. electromotive force, current, power, and energy. This part of the work involves the students' use of visual indicating devices.

The principles taught in this course are immediately applied in all experiments run in the measurements laboratory and so far as necessary in the machine testing laboratory.

*2½ semester hour credits*

### *EL 14 Electrical Measurements II*

Resistance, capacitance, inductance, magnetic induction, A.C. power and energy are treated in this course, with a detailed discussion of the methods of measuring them. This phase of the subject involves the use of both visual and sound indicating devices, and includes some work on the uses of circuits and bridges designed for high frequency measurements and tube constant determination. The student is given a thorough discussion of the construction, theory of operation, method of use, sources of error, etc., of the types of measuring instruments used in commercial work and in standardizing laboratories.

*2 semester hour credits*

### *EL 17 Electrical Engineering III*

This course is a continuation of Electrical Engineering II. It deals principally with polyphase circuits. Both balanced and unbalanced circuits are considered. The unbalanced condition is studied both by use of Kirchhoff's Laws and by the method of symmetrical phase components.

*Pre-requisite: M 6, EL 10*

*2 semester hour credits*

### *EL 18 Electrical Engineering III*

A careful, thorough, and detailed study of the construction, theory, operating characteristics, and testing of transformers is the aim of this course. Particular attention is given to single phase and polyphase transformers used for power purposes. Special types of transformers studied include the constant current transformer, the auto-transformer, and instrument transformers.

*2 semester hour credits*

### *EL 19 Electrical Testing Laboratory*

This course consists of a series of experiments involving the testing of machines. Preliminary reports are written by all students before the tests are performed in the laboratory. Experiments of the following type are used: measurement of stray load loss of D.C. motor, efficiency of machine by method of electrical supply of losses, electrical separation of losses, measurement of losses by retardation method, speed control of direct current motors by thyratrons.

*Preparation or taken concurrently: EL 17*

*2 semester hour credits*

### *EL 20 Electrical Testing Laboratory*

This is a continuation of EL 19 but the experiments are mostly on alternating current circuits and transformers. Typical experiments are studies of alternating current series and parallel circuits, ratio of transformation and core loss measurements for transformers, determination of the efficiency and voltage regulation of a transformer, transformer heat test, tests on a constant current transformer.

*Preparation or taken concurrently: EL 18, 19*

*2 semester hour credits*

### *EL 21 Electrophysics*

The first part of this course is concerned with Faraday's Rule and the extended Ampere Rule, divergence of electrical vectors, Poisson's equation, and Maxwell's field equations and wave equations. Study is then made of molecular activity, and various properties of and measurements on electrons.

*Pre-requisite: M 7*

*1 semester hour credit*

### *EL 22 Electrophysics*

Continuing EL 21 the topics considered are photo-electricity, X-rays, atomic structure and the spectrum, vacuum tubes, radio-activity, and the modern physics of matter and waves.

*Preparation: EL 21*

*2 semester hour credits*



### *EL 23 Electrical Measurements Laboratory*

This course consists of a series of experiments emphasizing the principles developed in courses EL 13 and EL 14. The student becomes familiar with the standard apparatus used in testing laboratories. Particular stress is laid on the correct use of the apparatus, and precision discussions are required throughout.

The general experiments cover various methods of measuring resistance, resistivity, conductivity, electromotive force, current, inductance, mutual inductance, capacitance, hysteresis loss, etc. Further experiments are made in cable testing, magnetic testing, wave form determination, and the use of special apparatus.

Thorough training in the principles of precision of measurements is also given, and applied to each experiment performed.

*2 semester hour credits*

### *EL 24 Advanced Measurements Laboratory*

This course concerns the use of laboratory and secondary standards and precision methods as applied to checking resistances, calibration of indicating and integrating instruments of various types.

It involves the use of the potentiometer, Weston laboratory standard instruments; precision model Kelvin Low Resistance and Carey-Foster Bridges; Westinghouse portable oscillograph, cathode ray oscillograph; ordinary, reflex, and logarithmic vacuum tube voltmeter, Anderson Bridge, Edgerton Stroboscope; low, medium, and high frequency oscillator; vacuum tube bridge; potential phase shifters and rotating standard. The work includes testing for characteristics and investigation of the action of multi-electrode tubes, thyatron, tungar rectifier, and artificial telephone line.

Precision work is insisted on throughout. The student is trained to develop speed and quickness of manipulation, but never at the expense of quality and accuracy of the work.

*2 semester hour credits*

### *EL 25 Electrical Engineering IV*

In this course a detailed study is made of alternating current synchronous machines. In addition to the study of the synchronous generator and the synchronous motor, considerable time is spent in discussing the problems involved in operating synchronous generators in parallel.

*Pre-requisite: EL 18*

*3 semester hour credits*



### *EL 26 Electrical Engineering IV*

This course is a continuation of EL 25. It deals with other types of alternating current machines. The machines studied in detail include the synchronous converter, the mercury arc rectifier, single phase and polyphase induction motors, induction generators, series and repulsion motors. The method of symmetrical phase components is used in the study of unbalanced conditions in certain types of motors.

*Preparation: EL 25*

*3 semester hour credits*

### *EL 27 Advanced Electrical Engineering Laboratory*

This is a laboratory course in alternating current machinery. The work includes tests on the heating, efficiency, and determination of the characteristics of various types of alternating current machinery, such as transformers, generators, and motors. A detailed preliminary study is made of each assigned experiment, involving the method to be used in obtaining the necessary data and the manner of obtaining the required results from this data. This is embodied in a preliminary report. The student then does the necessary laboratory work to obtain the required data, and finally works up the whole into a detailed final report. A minimum of assistance is given by the instructor in the actual laboratory work, the initiative and resourcefulness of the student being depended on to the greatest extent.

*Preparation or taken concurrently: EL 25*

*2 semester hour credits*

### *EL 28 Advanced Electrical Engineering Laboratory*

This is a continuation of EL 27. Preliminary and final reports similar to those of EL 27 are required in this course but the experiments deal more largely with the various types of alternating current motors. Provision is also made, toward the latter part of this course, for some choice by the student as to the type of investigation or experiment he wishes to carry on.

*Preparation or taken concurrently: EL 26*

*2 semester hour credits*

### *EL 29 Electrical Engineering V-A*

This course is designed to give the student a thorough grounding in the theory and application of the various types of electron tubes. It is not a course in radio communication although, of course, the tubes used for this purpose are considered. The material covered deals with fundamental constants of the vacuum tube, equivalent and alternative plate and grid circuit theorems, paths of operation, maximum, and maximum undistorted power output, inter-electrode capacity and low power amplifiers.

*Pre-requisite: EL 22*

*2½ semester hour credits*

### *EL 30 Electrical Engineering V-A*

This course is based on material covered in EL 29 and takes up the discussion of the uses of thermionic tubes in measuring instruments, oscillographs, rectifying and amplifying circuits, oscillators, and modulators.

*Preparation: EL 29*

*2½ semester hour credits*

### *EL 31 Electrical Engineering V-B*

This course given during the first semester of the senior year deals with the fundamentals of electrical transmission circuits. Hyperbolic functions and their application, the general differential equations of the transmission line, fundamental line constants, position angles, Pi and T structures, are developed for the D.C. circuits.

*2½ semester hour credits*

### *EL 32 Electrical Engineering V-B*

This course is a continuation of EL 31. It begins with the consideration of complex hyperbolic functions and then deals with the alternating current transmission circuit, the initial transient state, quarter and half wave line, and the fundamental properties of artificial lines and filter circuits.

*Preparation: EL 31*

*2½ semester hour credits*

### *EL 33 Advanced Experimental Investigations*

All seniors in the Department of Electrical Engineering are required to complete a thesis or an equivalent amount of advanced experimental work in the laboratories. Seniors not receiving departmental approval of a thesis subject will be required to complete satisfactorily eight advanced experimental investigations. Two required investigations will be given to all students. These are the Artificial D.C. Line and Magnetic Measurements. The remaining six experiments may be chosen from the following five fields: A.C. Machinery, Electronics, High Voltage, Lighting, and Communication.

Typical experiments available are the following: photometric measurements; a study of Blondel's two reaction method for a salient pole machine; a study of a full wave rectifier and filter for radio receivers; calibration of sphere, needle and rod gaps under 60 cycle and impulse voltages; and investigation of corona characteristics.

*2 semester hour credits*

### *EL 34 Advanced Experimental Investigations*

A continuation of EL 33 in which the following types of experiments are offered: characteristics of fluorescent lighting units with auxiliaries; power angle characteristics of a synchronous machine; a study of an inverse feed-back amplifier; a study of the Strobotron tube; a detailed study of impulse generator characteristics; and breakdown and power factor characteristics of liquid and solid dielectrics. Students who desire to investigate other problems for which equipment is available will be permitted to do so with the approval of the instructor in charge.

*Preparation: EL 33*

*2 semester hour credits*

## *Geology*

### *Gy 1 General Geology*

A study of earth movements and various terrestrial applications of solar energy. Lectures on fundamental general facts as to origin and movements of the earth, weathering, work of winds, underground and surface waters, glaciers and the glacial period, lakes and swamps, and vulcanism.

*2 semester hour credits*

### *Gy 2 General Geology*

Course Gy 1 is continued with such topics as mountain formation, oceanic life, atmosphere, and meteorology. A considerable portion of time is given to the study of igneous, sedimentary and metamorphic rocks, supplemented by laboratory and field work.

*Preparation: Gy 1*

*2 semester hour credits*

## *Industrial Engineering*

### *IN 3 Production Processes I*

A course in the techniques, processes, and machines used in the production of manufactured articles.

The subject matter is presented in lectures supplemented by slides, exhibits, and demonstrations. The processes covered are heat-treating, forging, welding, foundry practice, and die casting. The metallurgical principles involved are correlated with good shop practice in each case.

The construction nomenclature, and operation of the following machine tools are discussed: lathe, milling machine, planer, shaper, broaching machine, and grinder.

*2½ semester hour credits*



### *IN 4 Production Processes II*

This course is designed to apply economic principles to actual manufacturing situations and to acquaint the student with the proper angles, speeds, and feeds for metal cutting tools.

Typical problems considered are: the selection of the most economical material for a certain product, calculation of the minimum cost quantity in purchasing, determination of whether to use machine or hand labor for a given operation, and consideration of the cost factors involved in jig and fixture design.

The proper shapes, speeds, and feeds of the following cutting tools are discussed: milling cutter, broach, drill, lathe tool, and threading tools.

*1½ semester hour credits*

### *IN 5 Industrial Management I*

The course in Industrial Management places emphasis on the administrative phases of factory and plant operation. It deals with the location of the plant; plant design, structure, and services; plant layout; standardization, simplification, and specialization; and the public relations of industry.

*2 semester hour credits*

### *IN 6 Industrial Management II*

This course is a continuation of IN 5. It deals with the control of plant operations. Each department of a modern industrial concern is considered, emphasis being placed on the organization and management problems confronted and how they may be handled, with the intention that the student shall become familiar with the activities and general working of each department and the relationship which the departments hold to one another and to the business as a whole. In detail are considered: budgeting, standards of performance, wage systems, organization, routing, scheduling, dispatching, inventory control, quality control, and visual controls such as the organization chart, planning board, and departmental report. Considerable attention is given to the distribution of overhead expenses and standard costs.

*Preparation: IN 5*

*2 semester hour credits*

### *IN 7 Industrial Accounting*

This is a course designed to introduce the engineering student to the methods of analyzing and recording business transactions on the books of original entry and their classification in the ledger accounts. The purpose and use of the trial balance, the work sheet and the construction and analysis of the balance sheet and profit and loss statement are demonstrated by specific problems.

*2 semester hour credits*



### IN 8 *Industrial Accounting*

A continuation of IN 7 demonstrating the application of fundamental accounting principles to the particular problems involved in the several forms of business organization. The specific problems considered cover the partnership, corporation, and manufacturing organization.

*Preparation: IN 7*

*2 semester hour credits*

### IN 9 *Cost Accounting*

The primary purpose of this course is to establish an understanding of the basic purpose of cost accounting as a measure of operating efficiency.

The fundamental principles of cost accounting procedure are developed through the demonstration of accounting control of material, labor, and factory expenses together with the methods by which the factory operations are tied in with the financial records of the business organization. Specific problems in job order and process costs are studied in detail.

*Pre-requisite: IN 8*

*2½ semester hour credits*

### IN 10 *Cost Accounting*

This a continuation of IN 9 and deals with the application of the basic principles to specific cost accounting systems and budgetary control.

Predetermined standard, estimated and associative cost systems are discussed and illustrated.

*Preparation: IN 9*

*2½ semester hour credits*

### IN 11 *Methods Engineering*

This course comprises (1) a detailed study of time and motion study work; (2) a complete study and actual practice in micro-motion which is the use of motion pictures in the motion study work; (3) the preparation of simo-charts (the use of colored charts and symbols called Therbligs) which show all the elements in an operation cycle; (4) the making of process charts which is the use of specifically designed symbols, or industrial shorthand, to record motion analysis.

*Pre-requisite: IN 6*

*2½ semester hour credits*

### IN 14 *Industrial Finance*

The course in Industrial Finance is divided into two parts; the first half of the course presents the differences in the organization

of partnerships, corporations, individual proprietorships, joint-stock companies, and holding companies.

The second half of the course deals with problems of financial analysis. Industries are examined to determine their financial condition; their position in relation to similar concerns; the proportion of their fixed and variable expenditures; and the effect of price cutting and price changes on their sales volume, costs, and capital structure. Care is taken to give the student a basis for determining what constitutes sound financial policy for any industrial enterprise.

*2½ semester hour credits*

### *IN 15 Sales Engineering*

This course in the principles of marketing is designed to acquaint the engineering student with the field of distribution. It includes a complete study of the functions of marketing, the institutions and middle-men of the market, a study of the trade channels used to market specific commodities, placing particular emphasis on industrial goods.

*2½ semester hour credits*

### *IN 16 Personnel Administration*

A consideration of what modern industry is doing in making an application of science to the obtaining and retaining of an effective and co-operative working force. The student studies thoroughly personnel administration systems now in use including the preparation and use of many forms among which are the occupational description, application, and interview blanks, promotion charts, wage scales, personnel control charts, etc. In addition, such subjects as wage payment plans, profit sharing, the training of workmen, workers' security plans, and labor union and management relationships are given attention.

*2 semester hour credits*

### *IN 18 Sales Engineering Problems*

This course is a continuation of IN 15. It presents problems and case material for use in making application of the principles of marketing industrial goods. Considerable time is devoted to the study of the regulation and control of marketing processes and institutions by governmental agencies and legislation.

*2½ semester hour credits*

### *IN 21 Contracts*

Preparation for a career as an industrial engineer demands an understanding of the fundamental legal principles upon which modern business transactions are based. The course in Contracts

treats of the common law rules which underlie all branches of business law. The study of cases and decisions is supplemented by lectures and assigned readings in textbooks in order to develop a thorough understanding of the essentials of a valid contract such as offer and acceptance, consideration and form. The interpretation, operation and discharge of contracts are also considered. Such topics as agreement, competent parties, reality of consent, legality of object, sealed instruments, and the Statute of Frauds are treated in detail.

*2 semester hour credits*

### *IN 23 Industrial Statistics*

The increasing use of statistics in business and in the field of industrial engineering makes essential an understanding of the fundamental methods and applications of statistical analysis. In this course the important topics considered include the following: the collection of statistical data; the presentation of statistical data in tabular and graphic forms; and the uses and construction of frequency distributions, averages, measures of dispersion and skewness, and the normal curve. Specific attention is given to the practical uses and limitations of statistics in the work of the industrial engineer.

*2½ semester hour credits*

### *IN 24 Industrial Statistics*

Time series analysis receives major consideration, in this course. The standard procedures for measuring, separating, and eliminating trend, periodic, seasonal, cyclical, and irregular movements of time series are carefully studied. Each student is required to analyze a time series related to his co-operative employment or to a field of industry in which he has especial interest. The construction of index numbers, the use of currently published index numbers, correlation, and business forecasting complete the course content. Particular regard is paid to the internal use of statistics in industrial concerns.

*2½ semester hour credits*

### *IN 25 Industrial Plants*

This course includes the principles involved in the erection of an industrial plant, and the installation of its machines and equipment. Different types of structures are discussed with respect to details such as foundations, walls, columns, floors, windows, and so forth. Calculations and layout for a typical mill are carried out. Another problem consists of the calculation and layout of a



machine shop which includes the power requirements and placement of machines, consideration being given to the optimum conditions of maximum production and the most efficient routing of a product.

*Pre-requisite:* ME 23

*2½ semester hour credits*

*Preparation:* ME 30

## IN 26 *Industrial Plants*

This course, a continuation of IN 25, includes a problem on the heating and air conditioning of an industrial plant. The heating requirements in the winter and the cooling needs in the summer are calculated for a particular building. Another problem consists of the layout of a plant to serve a certain industry; determining the machines essential for the output of a given product; the power requirements for the plant, and the advisability of generating the power within the plant or purchasing it from outside; storage needs; arrangement of machines and material handling equipment; determination of belting sizes and shafting; and the cost of operation of the factory.

*Preparation:* IN 25

*2½ semester hour credits*

## *Mathematics*

### M 1 *College Algebra*

The study of algebra is scheduled to begin with the solution of the quadratic equation, simultaneous quadratics, and equations in quadratic form. However, a rapid although thorough review of the fundamentals of algebra precedes this. This solution of the quadratic is followed by a detailed study of the theory of exponents. Then follow radicals, series, variation, inequalities, and the elementary principles of the theory of equations. Considerable time is given to plotting and the use of graphs in the solution of equations. The elementary theory of complex numbers is also covered.

*3 semester hour credits*

### M 3 *Trigonometry*

This is a complete course in trigonometry and should enable the student to use all branches of elementary trigonometry both in the solution of triangles as well as in the more advanced courses where the knowledge of trigonometry is essential. Some of the topics covered are: the trigonometric ratios; inverse functions; goniometry; logarithms; circular measure; laws of sines; cosines, tangents, half angles; solution of oblique and right triangles; transformation and solution of trigonometric and logarithmic



equations. Considerable practice in calculation of practical problems enables the student to apply his trigonometry to problems arising in engineering practice at an early stage. Additional work, graphical and algebraic, is done with the complex number, introducing DeMoivre's theorem, and the exponential form of the complex number.

*2 semester hour credits*

#### *M 4 Analytic Geometry and Introduction to Calculus*

This being a basic course in preparation for any further study of mathematics, it requires a thorough knowledge of the fundamentals of algebra. The course covers cartesian and polar coordinates; graphs; the equations of simpler curves derived from their geometric properties; thorough study of straight lines, circles, and conic sections; intersections of curves; transformation of axes; plotting and solution of algebraic equations of higher order and of exponential, trigonometric, and logarithmic equations; loci problems. The general equation of the second degree is thoroughly analyzed in the study of conic sections. Some time is devoted to curve fitting from empirical data.

Explicit and implicit functions, dependent and independent variables, some theory of limits, continuity and discontinuity are given special attention both from the algebraic as well as geometric points of view. Some theorems on the infinitesimal are introduced and a study is made of infinity and zero as limits. Relative rates of change, both average and instantaneous, and the meaning of the slope of a curve follow. The differential and the derivative as applied to algebraic functions with the geometric interpretation is then studied. Simple applications with interesting practical problems help to develop interest here and lay a solid foundation for the study of the calculus. The introduction of the differential at the same time with the derivative helps considerably to bridge the large gap which usually exists when the student passes from the study of the elementary analytic geometry to the infinitesimal of calculus.

*Preparation: M 1, 3*

*5 semester hour credits*

#### *M 5 Differential Calculus*

The differential is introduced and defined at the outset of the course together with the derivative; geometric and practical illustrations are given of both; and both are carried along throughout the course. The work in the course consists of differentiation of algebraic, trigonometric, exponential, and logarithmic functions, both explicit and implicit; slopes of curves, maxima and minima with applied problems; partial differentiation; derivatives of higher

order; curvature; points of inflection; related rates; velocities, acceleration; expansion of functions; series. Although the subject matter deals with considerable theory, constant sight is kept of the practical application of the theory. The geometric interpretation of every new subject is carefully defined and problems are continually solved dealing in practical applications of the theory in geometry, physics, and mechanics.

*Pre-requisite:* M 1

*3 semester hour credits*

*Preparation:* M 4

### M 6 *Integral Calculus*

This is a continuation of Calculus M 5, and deals with integration as the inverse of differentiation as well as the limit of summation. The topics covered are methods of integration; use of integral tables; definite integrals; double and triple integrals; areas in rectangular and polar co-ordinates; center of gravity; moment of inertia; length of curves; volumes of solids; areas of surfaces of revolution; volumes by triple integration; practical problems in work, pressure, etc., depending on the differential and integral calculus for solution, solution of simpler differential equations.

*Preparation:* M 5

*3 semester hour credits*

### M 7 *Differential Equations*

The elementary theory of differential equations and the solution of certain ordinary and partial differential equations is offered here as a general course in mathematics. Although principally a problem course in solving differential equations, properties of the equations and of their solutions are deduced, and applications to the various fields of engineering, particularly electrical engineering, are analyzed.

*Preparation:* M 6

*2½ semester hour credits*

## *Mechanical Engineering*

### ME 1 *Mechanism*

This course deals mainly with a mathematical solution of problems involving angular and linear velocities and gear trains. It embraces a careful study of paths of mechanical movements and their application to velocity diagrams, quick-return mechanisms, and cams. The theory of gear tooth outlines is also investigated by graphical methods.

*3 semester hour credits*

### ME 15 *Industrial Plants*

The principles involved in the erection, installation, and management of an industrial plant are studied in this course. Various types of structures are described, with attention to such details as foundations, walls, columns, floors, and windows. The calculations and layout for a typical mill are also discussed. This material is followed by a problem on the calculation and layout of a machine shop, including power requirements and placement of machines, with special consideration to the best conditions for maximum production and the most effective routing of a given product.

*Preparation:* ME 23, ME 32

*2½ semester hour credits*

### ME 16 *Industrial Plants*

This course, a continuation of ME 15, includes a problem on the heating and air-conditioning of a building, and a design problem on the calculation and layout of a power plant. Sizes of equipment, costs of power generation, and various operating practices are discussed and worked out. The later problems of the course have to do with the layout of the power plant previously figured.

*Preparation:* ME 15

*2½ semester hour credits*

### ME 20 *Applied Mechanics (Statics)*

The subjects treated are collinear, parallel, concurrent, and non-concurrent force systems in a plane and in space; the determination of the resultant of such systems by both algebraic and graphical means, special emphasis being placed on the string polygon method for coplanar force systems; the forces required to produce equilibrium in such systems; first moments; and problems involving static friction, such as the inclined plane and the wedge.

*Pre-requisite:* P 1

*3 semester hour credits*

### ME 21 *Applied Mechanics (Kinetics)*

The subjects treated are continuation of first moments as applied to varying intensity of force and to the determination of center of gravities of areas and solids; second moments and the application to the determination of moment of inertia of plane and solid figures, radius of gyration, polar moment of inertia; product of inertia principal axes, uniform motion, uniformly accelerated motion, variable accelerated motion, harmonic motion, simple pendulum, rotation, plane motion, work, energy, momentum and impact.

*Preparation:* ME 20

*3 semester hour credits*



### ME 22 *Strength of Materials*

The topics covered in this course are physical properties of materials, stresses in thin hollow cylinders and spheres, riveted connections of the structural and continuous plate type, welded connections, and beams, covering shearing force and bending moment with stress analysis due to these effects and the design of beams for both conditions.

*Pre-requisite:* ME 20

*3 semester hour credits*

*Preparation:* ME 21, P 4

### ME 23 *Strength of Materials*

This is a continuation of ME 22 covering deflection of beams by the double integration method; stresses and strains in shafting due to torsion, angle of twist; horsepower; combined axial and bending loads, eccentric loads; compression members or columns by Euler's column formula, and by those of the Gordon-Rankine parabolic and straight line type.

*Pre-requisite:* ME 22

*2 semester hour credits*

### ME 24 *Advanced Mechanics*

Advanced problems in the strength of materials and dynamics are treated. Among the subjects under discussion are non-symmetrical bending, curved bars, flat plates, thick hollow cylinders, dynamical stresses in machine parts, and allied subjects leading to the more advanced applications of mechanics in machine design, the elastic theory, and photoelasticity.

*Preparation:* ME 23

*2 semester hour credits*

### ME 27 *Metallography*

The course in metallography is intended to show the student the relation between the crystalline structure of metals and their physical properties.

The theory of crystallization and the equilibrium diagram are studied. Specimens of metal of known composition are polished, etched, and studied by use of the metallograph, and their physical properties are compared. The effect of heat treatment on the crystalline structure is noted.

*Preparation:* IN 3

*2 semester hour credits*

### ME 29 *Heat Engineering (Power Plant Equipment)*

The course is largely a description of the many appliances used in modern power plants. There is also taken up a discussion of boilers and boiler accessories, ash and coal handling systems, the various types of engines with their valve gears and governing devices, condensers, feed-water heaters, pumps, etc.

*2 semester hour credits*



### ME 30 Heat Engineering (Thermodynamics)

In this introductory course in the fundamentals of thermodynamics the following subjects are discussed: general theory of heat and matter; first and second laws of thermodynamics; equations of state; fundamental equations of thermodynamics; laws of perfect gases; properties of vapors including development and use of tables and charts; thermodynamic processes of gases, and saturated and superheated vapors; and the general equations for the flow of fluids.

*Preparation:* P 4

*3 semester hour credits*

### ME 31 Heat Engineering

The principles of thermodynamics are here applied to various problems of heat engineering. These include the fundamental laws governing the flow of gases and vapors through nozzles and orifices with and without friction; the theory of vapor engines, including discussions of the Rankine, the reheating, the regenerative and the binary vapor cycles; the efficiencies and power calculations for actual steam engines; and the principles of heat transfer as applied to steady flow conditions and their applications to practical problems.

*Pre-requisite:* ME 30

*2½ semester hour credits*

*Preparation:* ME 29

### ME 32 Heat Engineering

In this course the single and multistage compressor cycles are studied and analyzed. Various types of modern internal combustion engines are taken up in detail, including the latest designs of automobile, airplane, and Diesel engines. Considerable stress is placed on the combustion process of power plants and internal combustion engines.

The Otto and Diesel cycles are carefully analyzed to determine how changes in pressures, compression ratios, clearances, and fuel cutoff effect the economy and performance of the engine.

Solid and air injection, high, medium, and low speed engines are also discussed.

*Preparation:* ME 31

*2½ semester hour credits*

### ME 33 Refrigeration

A discussion is given of the history, theory, equipment, and applications of refrigeration. The properties and hazards of the various refrigerants; the simple and compound compression cycle; the absorption system; the jet or vapor system; devices for improving theoretical and operating performance of machines are among the topics considered.

*Preparation:* ME 32

*2 semester hour credits*

### ME 34 *Steam Turbines*

A study is first made of the flow of steam through nozzles, dynamic action of jets on moving blades, and other elements in the design of a steam turbine. This material is followed by a consideration of the various types of turbines, their governing mechanisms, condensing equipment, and other constructional details.

*Preparation: ME 31*

*2 semester hour credits*

### ME 35 *Heat Engineering*

This is a short course covering the elements of thermodynamics and affording a general discussion of modern power plant equipment. Many typical calculations are made in regard to apparatus.

*Preparation: P 4*

*2 semester hour credits*

### ME 36 *Heat Engineering*

A continuation of ME 35, together with experimental work in the laboratory. Topics taken up in class include steam engine economy, multi-valve and multi-expansion engines, steam turbines, steam condensing equipment, pumps, and internal combustion engines.

In the laboratory, experiments are performed on air blowers, steam engines, water wheels, pumps, and internal combustion engines.

*Preparation: ME 35*

*2½ semester hour credits*

### ME 37 *Diesel Engines*

Analysis of the internal engine cycles based on the air cycle as well as the analysis with variable specific heats. The different types of Diesel engines are discussed and the methods of fuel injection are studied for each type.

*Pre-requisite: ME 32*

*2 semester hour credits*

### ME 38 *Diesel Laboratory*

This course includes a series of experiments on various apparatus used in modern power plants using Diesel power to illustrate under actual conditions the principles developed in ME 30 on thermodynamics. The students here apply in actual tests the knowledge they have acquired in the classroom, and make complete reports of these experiments including methods of testing and calculations.

*Preparation: ME 3*

*2 semester hour credits*

### ME 39 *Engine Dynamics*

A consideration of the vibrations, balancing, critical speeds, and inertia effects of high speed internal combustion engines.

*Pre-requisite:* ME 21

*2½ semester hour credits*

### ME 40 *Aerodynamics*

The course comprises a study of the fundamental theory of aerodynamics which underlies all calculations concerning the performance and stability of airplanes including characteristics of airfoils and elementary propeller theory.

*Preparation:* ME 21, CI 12

*2 semester hour credits*

### ME 42 *Heating and Air Conditioning*

The most important methods of heating and air conditioning various types of buildings are studied in this course. The principles of heat transfer and air flow are reviewed, and the application of them in the various systems is brought out through lectures and problems.

*Preparation:* ME 21, CI 12

*2 semester hour credits*

### ME 44 *Power Plant Engineering*

This course consists of topics and problems chosen largely from engineering practice selected to convey to the engineering students a firm grasp of fundamental principles and engineering methods of attacking and analyzing problems in power plant, not only from the point of view of scientific theory, but also with due consideration of the limitations imposed by practice and by costs. Efficiency and operating costs of different types of plants such as steam, hydro-electric, and Diesel engines are also carefully studied to determine the type of plant best suited for the conditions and location involved.

*Preparation:* ME 32

*2½ semester hour credits*

### ME 45 *Air Conditioning Design I*

A particular building will be taken as a class problem for heating and air conditioning. Various systems will be discussed with their application to the building in question. A layout of piping and duct system will be made together with complete calculations and estimation of cost. An investigation and study of existing plants around the city will be made with trips to these plants whenever possible in order to bring out the practical problems involved in the design.

*Pre-requisite:* ME 42

*2½ semester hour credits*



### ME 46 *Air Conditioning Design II*

This course is a continuation of ME 45, and will be an application of the principles brought out and discussed in ME 42 on heating and air conditioning.

*Preparation:* ME 45

*2½ semester hour credits*

### ME 48 *Air Conditioning Laboratory*

This course consists of a series of tests on various types of air conditioning and heating apparatus. Among the pieces of apparatus tested are the following: air blower; unit heater; carrier air conditioner provided for humidification or dehumidification; hot air furnace equipped with oil burner, humidifier, blower, and air filters; and also automatic controls and a special insulated constant temperature room for the study of problems in heating and air conditioning.

*Preparation:* ME 45

*2 semester hour credits*

### ME 51 *Machine Design*

Further practice is given the student in the application of theoretical principles previously studied, and at the same time he becomes familiar with the many practical details which must be considered in design work. The problems taken up in the early part of the course are of a static nature, while the later problems involve dynamical stresses. The problems vary from year to year, but the following are typical of the designs taken up: hydraulic press, arbor press, hydraulic flanging clamp, crane, air compressor, punch and shear, stone-crusher, and so forth.

In each design, the construction details are carefully considered, with special attention to methods of manufacture, provision for wear, lubrication, and so forth. The work is based on rational rather than empirical methods, the student being required to make all calculations for determining the sizes of the various parts and all necessary working drawings.

*Preparation:* ME 24

*3 semester hour credits*

### ME 52 *Machine Design*

This course comprises a continuation of Machine Design ME 51 with special reference to designs involving dynamical stresses. A thorough discussion of the principles and methods of lubrication forms a part of the course.

*Preparation:* ME 51

*3 semester hour credits*



### ME 54 Diesel Engine Design

This course consists of a layout problem in which an engine is designed to develop a definite horse power and in which the stresses in the various parts of the engine are analyzed.

*Preparation:* ME 39

*2½ semester hour credits*

### ME 61 Mechanical Engineering Laboratory

This course comprises a preliminary series of experiments upon various apparatus used in modern power plants, to illustrate under actual conditions the principles developed in Heat Engineering ME 30. These exercises are a preparation for more complete tests to be run during the following semester.

The knowledge they have gained in the classroom, the students here apply in actual tests, and make a complete report of these experiments, including methods of testing and calculations. The following experiments are illustrative of the type of work taken up; calibration of gauges, indicator practice, plain slide valve setting, test on steam calorimeters, flow of steam through orifices, steam injector test, weir calibration, and tests on friction of drives.

*Pre-requisite:* ME 29

*2 semester hour credits*

*Preparation:* ME 31

### ME 62 Mechanical Engineering Laboratory

This course consists of a series of tests on various types of power plant equipment, more complete than those made in ME 61. Among the pieces of apparatus tested are the following: steam engine, gasoline engine, air compressor, triplex power pump, steam pulsometer, rotary power pump, Pelton water wheel, centrifugal pumps, Ford gasoline engine, Warren steam pump and steam turbine. Experiments are also made in flow of water measurements and flow of air.

A complete report is made on each test, describing the machine tested, explaining how the test is made, and giving the results, in accordance with the A.S.M.E. Power Test Codes.

*Preparation:* ME 32, 61

*2 semester hour credits*

### ME 63 Mechanical Engineering Laboratory

This is a continuation of course ME 62, to which it is generally similar. Some further experiments are made in the testing of materials, such as compressive, tensile, torsion, impact, and bending tests. A boiler test of from ten to twenty-four hours' duration is made to determine the performance and efficiency of the boilers in the power plant; and oils and coals are tested in the laboratory to determine their characteristics and calorific values.

*Preparation:* ME 32, 62

*2½ semester hour credits*

### ME 69 *Testing Materials Laboratory*

A detailed study is made of the methods of manufacturing, properties, and uses of materials used in engineering work, such as iron, steel, lime, cement, concrete, brick, wood, and stone. Methods of testing and strength of various materials used by the engineer are also taken up. Each student is required to prepare a paper on some subject of especial importance which is assigned by the instructor.

The work of this course is carried out by the students, working in small groups. It includes tests to determine the elongation, reduction of areas, modulus of elasticity, yield point, and ultimate compressive strength of metals such as steel, cast iron, copper, and brass; compressive tests on timber and concrete, and tests to determine the deflection, modulus of elasticity, elastic limit, and ultimate transverse strength of steel and wooden beams subject to transverse load. Torsion and impact tests are carried out and their results correlated with those of the tensile tests.

The effect of various mixes and curing conditions on the tensile and transverse strength of cement and mortar are studied. Special problems are assigned in the failure of metals by fatigue.

*Preparation:* ME 22

*1½ semester hour credits*

### ME 70 *Testing Materials Laboratory*

A continuation of course ME 69.

*Preparation:* ME 69

*1½ semester hour credits*

### ME 73 *Aircraft Structures*

The fundamental analysis of the forces, reactions, shears, and moments as applied to aircraft structures is the object of this course.

*Preparation:* ME 23

*2 semester hour credits*

### ME 74 *Aeronautical Laboratory*

Experimental work in connection with airplane engines, aeronautical equipment, and wind tunnel performance.

*Preparation:* ME 40

*2 semester hour credits*

### ME 76 *Aircraft Engine Design*

This course covers the design of an airplane engine involving the thermodynamic principles as well as the stresses in the crankshaft, connecting rods, cylinders, springs, and other parts of the engine.

*Preparation:* ME 39

*2½ semester hour credits*

## Physics

### *P 1 Physics I*

A course in the study of the fundamental principles of the mechanics of physics. Some of the topics covered are simple harmonic motion, uniformly accelerated motion, friction, work, energy, power, fluid pressure, angular velocity, centripetal force, equilibrium under the action of a series of parallel forces and equilibrium under the action of concurrent forces.

*3 semester hour credits*

### *P 2 Physics I*

This is a thorough course in magnetism and electricity covering all the details within the scope of standard college texts on these subjects. All lectures are illustrated by means of lantern slides, motion pictures, and special apparatus.

*3 semester hour credits*

### *P 3 Physics II*

A course in the study of wave motion, sound, and light. Molecular mechanics and other fundamental principles of physics are stressed at the beginning.

All lectures in physics are accompanied by appropriate demonstrations.

*Preparation: P 1, 2*

*2 semester hour credits*

### *P 4 Physics II*

The topics studied are thermometry, expansion of solids, liquids, and gases; calorimetry; change of state including latent heat of fusion and vaporization (sublimation); triple point diagram; conduction and radiation; and the mechanical equivalent of heat.

*Preparation: P 1, 2*

*2 semester hour credits*

### *P 5 Physics Laboratory*

This course consists of experiments in mechanics, light, electricity, and magnetism performed by each student supplementing the lecture and class room work of courses P 1, P 2, and P 3. The experiments on mechanics include: the use of the vernier, micrometers and spherometer, the calculation of true weights, the funicular polygon, gyroscopic motion, simple harmonic motion and the determination of areas by means of the planimeter. Other experiments in this course include plotting the magnetic field about a bar magnet and the determination of the pole strength and field strength of the magnet, the position of images in a combination of lenses and one experiment on electrostatics.

*Preparation: P 1, 2*

*1 semester hour credit*

### *P 6 Physics Laboratory*

A continuation of the experiments started in P 5 including experiments on sound and heat. Some of the experiments of this course are: the modulus of elasticity, the determination of the velocity of sound, the coefficient of cubical expansion of mercury, the air thermometer, the determination of the mechanical equivalent of heat, the study of the maximum and minimum thermometers, and the use of the spectroscope in the study of the bright line and solar spectra. The experiments of this course supplement the class work of courses P 1, P 2, P 3, and P 4.

*Preparation: P 1, 2*

*1 semester hour credit*

### *P 7 Physics Laboratory*

This course is very similar to P 5 but broader in scope and designed particularly for electrical engineering students.

*Preparation: P 1, 2*

*2 semester hour credits*

### *P 8 Physics Laboratory*

A course similar in content but broader in scope than P 6 and designed particularly for electrical engineering students.

*Preparation: P 1, 2*

*2 semester hour credits*

## *Physical Education*

### *PE 1 Hygiene*

One class hour a week is devoted to the study of information closely related to the Physical Training work and to personal and mental hygiene. For each class lecture, the student is assigned at least one hour of outside study based on the required textbook. The course includes enough of the fundamentals of physiology and anatomy to enable the student to understand such parts of the course as require some knowledge of these subjects.

*1 semester hour credit*

### *Physical Training*

All first year students are required to take Physical Training. Health, strength, and vitality do not come by chance, but by constant attention to those factors involved in their development. It is very essential for the student to acquire good habits of living.



The work in the course includes a formal calisthenic program, special exercise classes for the correction of postural defects, participation in the regular athletic program, including baseball, basketball, football, hockey, track, and many types of informal games. All members of the class are also required to learn to swim.

Students wishing to be excused from Physical Training because of physical defects are required to present a petition to the faculty supported by a physician's certificate.

*No credit*

## *Orientation*

This course is required of all first year students and is designed to make the entering student explicitly aware of those facts, principles, and techniques which are significantly related to the maintenance of his intellectual efficiency, to assist him in making desirable social adjustments in the college community, to help him make a wise choice in his upperclass field of specialization. Special effort is made to prepare the student to make an early and satisfactory adjustment to the conditions of the co-operative work. Lectures and individual conferences.

*No credit*

## *Sociology*

### *S 1 Introduction to Sociology*

In presenting a survey of the origins and sources of human society, this study provides orientation for the course in principles and problems which follows. The several theories of organic evolution are discussed. The antiquity of man and basic anthropological data are considered. The racial and ethnic groupings of man are then studied in the light of biological, geographical, and cultural factors.

*2 semester hour credits*

### *S 2 Principles of Sociology*

Facts and principles basic to a general knowledge of the field of sociology are presented. The origins, forms, and forces of human associations are discussed. A study is made of the principal socio-political groups such as socialism, communism, fascism, and democracy. The course is practical in emphasis and is designed to meet the needs of the student who desires a survey of the subject.

*2 semester hour credits*

## *Elective Liberal Courses*

### *B 50 General Biology*

This is a comprehensive course in biology dealing with animals and plants and their relation to their environment. The fundamental phenomena of living things are stressed. General biological laws and theories are discussed.

Laboratory work illustrates the lectures.

*4 semester hour credits*

### *By 50 Men of Science*

The intent of this course is to acquaint the students in the several professional departments of engineering with the lives and personalities of those men who were responsible for the important fundamental principles and discoveries upon which their special branches of engineering are based and by means of which they have been developed. It is not intended to discuss their scientific work but rather to make them living and real characters so far as possible so that the students will appreciate them as fellow men instead of mere vague names attached to some law or principle.

*2 semester hour credits*

### *E 50 Shakespeare*

An introductory college reading course in Shakespeare in which the emphasis will be placed upon character study, development of plot, and interpretation.

Four plays selected from the following will be read in class: *Henry IV, Part I, Romeo and Juliet, Twelfth Night, Much Ado About Nothing, King Lear*, and *Othello*. One play, probably either *Henry V* or the *Tempest*, will be assigned for outside reading.

The purpose of the course is to develop in the student an appreciation of Shakespeare to train him in sound habits of reading.

*2 semester hour credits*

### *E 51 The Short Story*

This course is intended to give the student training and practice in the reading of the short story. It includes a brief account of the origin and development of the short story as a fictional form and the study of the technique of character portrayal, plot construction, setting, and theme. Short stories are assigned for reading and analysis.

*2 semester hour credits*

### *E 52 The American Novel*

This course traces the appearance of the American novel from about 1790 to the present. It includes a discussion of the influence of the English novel on early American writers, the exploitation of patriotic tradition and the American scene, frontier romance, "local color" literature, experiments in naturalism, and modern techniques. Four novels will be assigned for reading.

*2 semester hour credits*

### *GA 51 History of Art I*

This course is designed to cultivate a knowledge and appreciation of the visual arts, architecture, sculpture, and painting, through a survey of their development from earliest times to the fall of Imperial Rome. It includes a study of the art of Egypt, Mesopotamia, Assyria, Babylonia, Persia, Crete, Greece, and Rome.

Lectures are illustrated by lantern slides, and the work of the course includes textbook and collateral readings, regular quizzes and examinations, and some study at nearby museums.

*2 semester hour credits*

### *GA 52 History of Art II*

This course is a continuation of GA 51, but the latter is not a pre-requisite. It includes a study of the visual arts, architecture, sculpture, and painting, from the time of the early Christian Church to the close of the Italian Renaissance period.

Lectures are illustrated by lantern slides, and the work of the course includes textbook and collateral readings, regular quizzes and examinations, and some study at nearby museums.

*2 semester hour credits*

### *Gv 51 American Constitutional Law*

This course contemplates a brief study of the history of constitutional government from its origin in the struggle in England between King and parliament over the taxing power; the continuation of that struggle between the colonial assemblies and the parliament; the formation of the confederation of the states; the weaknesses of the confederation that rendered it inadequate; conditions that made it necessary to bring about "a more perfect union"; how the national constitution was made conferring all necessary powers upon the national government and making the constitution the supreme law of the land.

A brief study of political and legal science is developed through the critical consideration of cases "selected in part for their historical value but chiefly to provide, in the language of the Supreme

Court a maximum of constitutional principles in a minimum of time." This is followed by the presentation in a condensed form of the fundamental law of the state and nation together with the rules and decisions which have developed and accumulated in the construction and application of constitutional provisions.

*2 semester hour credits*

### Gy 50 Geology

(Not Open to Civil Engineering Students)

This is a study of earth movements and the various terrestrial applications of solar energy. The more important geological processes — erosion, sedimentation, deformation, and eruption — are taken up and discussed. The course includes lectures on the broader structural features of the earth's crust and the application of the principles of structural geology to practical engineering problems.

*2 semester hour credits*

### Ph 50 Philosophy

After surveying the nature, purpose, and value of philosophy, this course considers such basic principles as the following: concepts of reality; the nature of space, time, and relativity; theories of knowledge; the nature of mind; and the meaning of existence. The course is designed to train the student to think philosophically, as well as to acquaint him with data in the field.

*2 semester hour credits*

### Ps 50 General Psychology

(Not Open to Students who have had Ps 1 or Ps 2)

An introductory survey is made of those methods and findings in psychology which are of practical importance in business and industry. The topics which will be considered include individual differences, personality, motivation, leadership, morale, propaganda.

*2 semester hour credits*

### S 50 The Family

With emphasis on the practical, this course will deal with the development of the modern family as a basic sociological institution. Problems confronting marriage and the family will be discussed and solutions proposed. A number of special lecturers will be brought into the course. Optional field trips will be offered.

*2 semester hour credits*



### *U 50 Contracts*

(Not Open to Mechanical and Industrial Engineering Students)

Preparation for life as well as for a profession requires an understanding of the most essential contractual relationships which arise repeatedly in connection with the acts of individuals and of social and economic institutions. This course is intended to supply such an understanding. The broad and significant aspects of both common law contracts and statutory contracts are treated. Textual reading and lectures are supplemented by study and discussions of actual cases and decisions. Each student is required to analyze and present some cases. Chief emphasis is placed on the creation, operation and discharge of common law, agency, sales, and negotiable instruments contracts.

*2 semester hour credits*

### *Thesis*

Theses are not required of candidates for the bachelor's degree. Certain students, who have demonstrated marked ability in the field of research, may be permitted to substitute a thesis for one or more courses of the senior year.

By "thesis" is meant an essay involving the statement, analysis, and solution of some problem in pure or applied science. Its purpose is to demonstrate a satisfactory degree of initiative and power of original thought and work on the part of each candidate for an engineering degree.

The subject of the thesis is to be decided in conference between the candidate and that faculty member of the professional department to whom he is assigned for supervision in thesis work; final approval, however, resting with the head of the department. The subject may be one of structural design, research, testing, study of a commercial process, etc., but in no case will a mere résumé of prior knowledge or discussion, either or both, of the present state of the matter be acceptable. This, it is true, must normally be made, but in addition thereto there must be a certain amount of work planned and executed, aimed toward the extension of the present field of information regarding the subject chosen.

In many cases the student presents an individual thesis. However, in nearly equal number, acceptable subjects will be found necessitating the co-operation of at least two men, either of the same or sometimes of different professional departments. In such cases, each man is primarily responsible for a certain part of the work, while also making himself wholly familiar with the entire problem; and the completed thesis must show clear evidence of the evenly-balanced co-operation and labor of the men concerned.

The completed thesis will be examined for acceptance or rejection from the technical viewpoint by the professional departments interested, and then forwarded to the Secretary of the Faculty, final approval of the thesis resting with the Dean of the College involved.

Upon acceptance, the thesis becomes the property of the University, together with all apparatus and material used in connection therewith, except that hired or borrowed, or originally the personal property of the candidate. It is not to be printed, published, nor in any other way made public except in such manner as the professional department and the Dean shall jointly approve.

Frequently thesis subjects may be chosen on problems arising in the plant where the student is employed at co-operative work. Employers are usually glad to consult with the student in the selection of the subject and the subsequent development of the thesis.

When theses are conducted in this manner, it is understood that the employer is not expected by the University to assume any expense of the thesis nor to furnish any supplies or equipment to be used in the development of the thesis other than those which he may consider it advisable and desirable to place at the disposal of the students. The regulations governing the use of laboratories and buildings of the co-operating firms will vary in practically all cases and each student must naturally be governed definitely by the regulations existing at the plant where the thesis is to be conducted.

It is understood that the thesis work must not in any way interfere with the regular required co-operative work and must be done during hours distinctly outside of regular co-operative work hours unless special request is made by the co-operating firm for some other arrangement.

Theses conducted in conjunction with co-operating firms must be submitted in duplicate, one copy to be presented by the Director of Co-operative Work to the co-operating employer.

For all further information, the candidate for the degree is referred to the "Directions for Theses", which he may obtain from his professional department at the end of his junior year.

# NORTHEASTERN UNIVERSITY

## *Courses of Instruction Offered in the Day Colleges*

Certain of the courses here listed are offered only in alternate years, and the University reserves the right to withdraw any course in which there is insufficient enrollment.

Courses not included in the prescribed curricula (pages 66 to 75) may be taken only after approval by the student's faculty adviser. Except where otherwise indicated, electives are not open to freshmen.

Pre-requisite courses are divided into two groups. Those courses printed in regular type (AC2) must have been completed with passing grades before a student will be permitted to register for the advanced courses to which they apply. Those courses printed in italics (B3) are of such a preparatory nature that a student undertaking an advanced course without having had the preparatory courses specified, will ordinarily find himself greatly handicapped, and he may not register in the advanced course without the consent of the instructor.

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College*	Curriculum	Yr.
<i>Accounting</i>								
AC1	Accounting I		3	3	2	BA	All	2
AC2	Accounting I		3	3	2	BA	All	2
AC3	Accounting II	AC2	3	3	2	BA	All	3
AC4	Accounting II	AC2	3	3	2	BA	All	3
AC5	Cost Accounting	AC4	3	2	2	BA	I & IV	4
AC6	Cost Accounting	AC4	3	2	2	BA	I & IV	4
AC7	Accounting Problems	AC4	3	4	0	BA	I & II	4
AC8	Accounting Problems	AC4	3	4	0	BA	I	4
AC9	Income Tax and Public Accounting	AC4	3½	4	0	BA	I	5
AC10	C.P.A. Problems	AC4	3½	4	0	BA	I	5
<i>Biology</i>								
B1-A	General Biology		4	4	3	LA	Elective	1
B1	General Zoology		3	2	2	LA	Biology	2
B2	General Botany		3	2	2	LA	Biology	2
B3	Invertebrate Zoology	B1	2	2	3	LA	Biology	3
B4	Invertebrate Zoology	B3	2	2	3	LA	Biology	3
B5	Vertebrate Zoology	B1	2	2	3	LA	Biology	3
B6	Vertebrate Zoology	B5	2	2	3	LA	Biology	3
B7	Animal Physiology	B6	2	3	0	LA	Biology	
B8	Animal Physiology	B7	2	3	0	LA	Biology	
B9	Principles of Genetics	B1,2	2	3	0	LA	Biology	
B10	Principles of Genetics	B9	2	3	0	LA	Biology	
B11	Animal Histology	B6	2	2	2	LA	Biology	
B12	Animal Histology	B11	2	2	2	LA	Biology	
B13	Vertebrate Embryology	B6	2	2	2	LA	Biology	
B14	Vertebrate Embryology	B13	2	2	2	LA	Biology	
B15	Parasitology	B6	2	2	2	LA	Biology	
B16	Parasitology	B15	2	2	2	LA	Biology	
B17	Mammalian Anatomy	B6	2	1	6	LA	Biology	
B18	Mammalian Anatomy	B17	2	1	6	LA	Biology	

\*NOTE: BA = College of Business Administration.  
LA = College of Liberal Arts.  
Eng = College of Engineering.



No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Biology — Continued</i>								
B19	Histological Technique	B11	2	1	6	LA	Biology	
B20	Histological Technique	B19	2	1	6	LA	Biology	
B21	History of Biology		2	3	0	LA	Biology	
B22	History of Biology		2	3	0	LA	Biology	
B50	General Biology		4	4	3	Eng,BA	Elective	
B61	Seminar		2	3	0	LA	Biology	
B62	Seminar	B61	2	3	0	LA	Biology	
B65	Thesis		3			LA	Biology	
B66	Thesis		3			LA	Biology	

*Biography*

By50	Men of Science		2	3	0	Eng,BA	Elective	
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*Co-ordination*

C1	Vocational Conference		1½	2	0	LA	All	5
C2	Vocational Conference		1½	2	0	LA	All	5
C7	Engineering Conference		1½	2	0	Eng	All	5
C8	Engineering Conference		1½	2	0	Eng	All	5
C11	Business Conference		1½	2	0	BA	All	5
C12	Business Conference		1½	2	0	BA	All	5

*Chemistry*

Ch1	General Chemistry		4	3	3	Eng,LA	{ All,Eng LAPure & Applied Science	1
Ch2	General Chemistry	Ch1	4	3	3	Eng,LA	{ All,Eng LAPure & Applied Science	1
Ch3†	General Chemistry		4	3	3	Eng,LA	{ All,Eng LAPure & Applied Science	1
Ch4†	General Chemistry	Ch3	4	3	3	Eng,LA	{ All,Eng LAPure & Applied Science	1
Ch9	Qualitative Analysis	Ch1,2	3	4	0	Eng,LA	IV(E), LACHem	2
Ch11	Qualitative Anal. Lab.	Ch1,2,9	2½	0	11	Eng,LA	LACHem	2
Ch12	Quantitative Analysis	Ch1,2,9	2	3	0	Eng,LA	LACHem	2
Ch13	Quantitative Analysis	Ch1,2,12	2	3	0	Eng,LA	LACHem	3
Ch14	Quantitative Anal. Lab.	Ch1,2,11,12	1½	0	7	Eng,LA	LACHem	2
Ch15	Quantitative Anal. Lab.	Ch14	2	0	9	LA	Chem	3
Ch17	Quantitative Anal. Lab.	Ch1,2,13,14	1	0	5	Eng,LA	IV(E), LACHem	3
Ch31	Organic Chemistry	Ch1,2,40	2	3	0	Eng,LA	IV,LACHem	4
Ch32	Organic Chemistry	Ch31	2	3	0	Eng,LA	IV,LACHem	4
Ch33	Organic Chem. Lab.	Ch1,2,31,40	1	0	5	Eng,LA	IV,LACHem	4
Ch34	Organic Chem. Lab.	Ch32,33	1	0	5	Eng,LA	IV,LACHem	4
Ch35	Organic Chemistry	Ch32	2	3	0	Eng,LA	IV(E), LACHem	5
Ch37	Organic Chem. Lab.	Ch34,35	2	0	9	LA	Chem	5
Ch39	Organic Chem. Lab.	Ch34,35	1	0	5	Eng	IV	5

†Note: Students who have had no high school chemistry take Ch3 and Ch4 instead of Ch1 and Ch2.



No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Chemistry — Continued</i>								
Ch40	Physical Chemistry	Ch12,14,13,17	2½	3	2	Eng,LA	IV(E), LACChem	3
Ch41	Physical Chemistry	Ch40	3½	4	4	LA	Chem	4
Ch42	Physical Chemistry	Ch41	3½	4	4	LA	Chem	4
Ch45	Physical Chemistry	Ch13,17,40	3	4	2	Eng	IV	4
Ch46	Physical Chemistry	Ch45	3	4	2	Eng	IV	4
Ch48	Colloidal Chemistry	Ch41	2½	3	2	LA	Chem	
Ch51	Sources of Information	Ch1,2	1	1	0	Eng,LA	{IV—Eng LACChem	2 2
Ch52	History of Chemistry	Ch1,2	2	3	0	Eng,LA	Elective	
Ch63	Advanced Chemistry	Ch42	2	3	0	LA	Chem	5
Ch64	Advanced Chemistry	Ch35	2½	4	0	LA	Chem	5
Ch65	Thesis	Ch42	3	0	9	LA	Chem	
Ch66	Thesis	Ch42	4	0	12	LA	Chem	
Ch101	Adv. Physical Chemistry		3			LA	Graduate	
Ch102	Adv. Physical Chemistry		3			LA	Graduate	
Ch103	Adv. Organic Chemistry		3			LA	Graduate	
Ch104	Adv. Organic Chemistry		3			LA	Graduate	
Ch105	Graduate Thesis		2-4			LA	Graduate	
Ch106	Graduate Thesis		2-4			LA	Graduate	
Ch107	Graduate Thesis		2-4			LA	Graduate	
Ch108	Graduate Thesis		2-4			LA	Graduate	

*Chemical Engineering*

ChE1	Flow of Fluids	P1	2	3	0	Eng	IV	3
ChE2	Industrial Stoichiometry	Ch12,13	2	3	0	Eng	IV	3
ChE3	Unit Operations	ChE1	3	4	0	Eng	IV	4
ChE4	Unit Operations	ChE2,3	3	4	0	Eng	IV	4
ChE5	Unit Operations Lab.	ChE3	1½	0	4	Eng	IV	4
ChE6	Unit Operations Lab.	ChE4	1½	0	4	Eng	IV	4
ChE7	Inorganic Chem. Tech.	Ch9,ChE2	2	3	0	Eng	IV	5
ChE8	Organic Chem. Tech.	Ch32,ChE4	2	3	0	Eng	IV	5
ChE9	Chem. Process Lab.	ChE4	3	1	6	Eng	IV	5
ChE10	Chem. Eng. Projects	ChE4	4	1	6	Eng	IV	5
ChE11	Chem. Eng. Thermo-dynamics	Ch46	2	3	0	Eng	IV	5
ChE12	Engineering Materials		2	3	0	Eng	IV	5

*Civil Engineering*

CI3	Surveying I	M3	1½	3	0	Eng	I	2
CI4	Surveying II	CI3	2½	4	0	Eng	I	2
CI5	Surveying I, F & P	D1,CI3	1	0	5	Eng	I	2
CI6	Surveying II, F & P	CI4,5	1	0	5	Eng	I	2
CI7	Surveying III	CI3,4	2	3	0	Eng	I	3
CI8	Surveying IV	CI7	2	3	0	Eng	I	3
CI9	Surveying III, F & P	CI5,6	1	0	5	Eng	I	3
CI10	Surveying IV, F & P	CI8,9	1	0	5	Eng	I	3
CI11	Hydraulics	ME20,21	2½	4	0	Eng	I,II,III,V	3
CI12	Hydraulics	CI11	2	3	0	Eng	I,II,V	3
CI15	Theory of Structures	ME22,23	3	4	0	Eng	I	4
CI16	Theory of Structures	CI15	3	4	0	Eng	I	4
CI21	Sanitary Engineering	CI11,12	2	3	0	Eng	I	4
CI22	Sanitary Engineering	CI21	2	3	0	Eng	I	4
CI23	Engineering Structures	CI15,16,ME23	3	4	0	Eng	I	5
CI24	Engineering Structures	CI23	3	4	0	Eng	I	5
CI25	Concrete	ME23	2	3	0	Eng	I	5

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Civil Engineering — Continued</i>								
CI26	Concrete	CI25	2	3	0	Eng	I	5
CI29	Design of Structures	CI23,25	3	2	6	Eng	I	5
CI30	Design of Structures	CI24,26,29	3	2	6	Eng	I	5
CI31	Highways	CI7,9	2	3	0	Eng	I	5
CI32	Highways	CI31	2	3	0	Eng	I	5
<i>Drawing and Graphic Arts</i>								
D1	Graphics I		3	0	6	Eng,LA	{E,All LA,Applied Science	1
D2	Graphics II	D1	3	0	6	Eng,LA	{E,All LA,Applied Science	1
D3	Engineering Drawing	D1	2	0	6	Eng	III	2
D4	Machine Drawing	D1	2	0	6	Eng	II,V	2
<i>English</i>								
E1	English I		3	3	0	Eng	All	1
E2	English I		3	3	0	Eng	All	1
E1-A	English I		3	3	0	LA	All	1
E2-A	English I	E1-A	3	3	0	LA	All	1
E1-B	English		3	3	0	BA	All	1
E2-B	English		3	3	0	BA	All	1
E3-B	Report Writing		2	3	0	BA	All	2
E4-B	Business Correspondence		2	3	0	BA	All	2
E5-B	Adv. Report Writing		2	3	0	BA	All	5
E5	Advanced Composition	E2-A	2	3	0	LA	Elective	
E6	Advanced Composition	E5	2	3	0	LA	Elective	
E7	Creative Writing	E6	2	3	0	LA	English & J.	3
E8	Creative Writing	E7	2	3	0	LA	English & J.	3
E9	Journalism I		3	4	0	LA,BA	{LAJour BA IV	3
E10	Journalism I	E9	3	4	0	LA,BA	{LAJour BA IV	3
E11	Journalism II	E10	3	4	0	BA	IV	3
E12	Journalism II	E11	3	4	0	BA	IV	3
E13	Effective Speaking		1	2	0	BA	All	4
E14	Effective Speaking	E13	1	2	0	BA	All	4
E15	Survey of English Lit.		3	4	0	LA,BA	Elective	2
E16	Survey of English Lit.		3	4	0	LA,BA	Elective	2
E17	English Drama before Shakespeare		2	3	0	LA	English	3
E18	Chaucer		2	3	0	LA	English	3
E19	Shakespeare		2	3	0	LA,BA	Elective	
E20	Shakespeare		2	3	0	LA,BA	Elective	
E21	19th Cent. Poetry I		2	3	0	LA	Elective	
E22	19th Cent. Poetry II		2	3	0	LA	Elective	
E23	17th & 18th Cent. Prose		2	3	0	LA	Elective	
E24	19th Cent. Prose		2	3	0	LA	Elective	
E25	Am. Lit. to 1860		2	3	0	LA,BA	Elective	
E26	Am. Lit. after 1860		2	3	0	LA,BA	Elective	
E27	Hist. of English Novel		2	3	0	LA	Elective	
E28	Hist. of English Novel		2	3	0	LA	Elective	
E29	Great European Writers		2	3	0	LA	Elective	
E30	Great European Writers		2	3	0	LA	Elective	
E31	Comparative Drama		2	3	0	LA	Elective	
E32	Comparative Drama		2	3	0	LA	Elective	
E33	Modern Lit. 1895-1915		2	3	0	LA	Elective	

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>English — Continued</i>								
E34	Post-War Literature		2	3	0	LA	Elective	
E50	Shakespeare		2	3	0	Eng	Elective	
E51	Short Story		2	3	0	Eng,BA	Elective	
E52	American Novel		2	3	0	Eng,BA	Elective	
E61	Seminar		2	3	0	LA	Elective	
E62	Seminar	E61	2	3	0	LA	Elective	

*Economics*

Ec1	Economic Geography		4	4	0	BA	All	1
Ec2	Com. & Ind. Hist. of U. S.		4	4	0	BA	All	1
Ec3	Economic Principles		2	3	0	{BA LA	AllBA Econ & Soc	2
Ec4	Economic Principles	Ec3	2	3	0	Same as Ec3		
Ec5	Economic Problems	Ec3	2	3	0	{BA LA	All Econ & Soc	3
Ec6	Economic Problems	Ec5	2	3	0	Same as Ec5		
Ec7	Money and Banking	Ec3,4	2	3	0	LA	Elective	
Ec8	Business Cycles	Ec6	2	3	0	LA,BA	Elective	
Ec9	Statistics in Business		2	3	0	BA	All	4
Ec10	Statistics in Business		2	3	0	BA	All	4
Ec11	Labor Problems	Ec3,4	3	4	0	LA,BA	Elective	
Ec12	Economic Systems	Ec3,4	2	3	0	LA,BA	Elective	
Ec14	Inter. Ec. Relations	Ec6	3	4	0	LA,BA	Elective	
Ec15	Hist. of Econ. Thought	Ec6	2	3	0	LA,BA	Elective	
Ec16	Adv. Econ. Theory	Ec15	2	3	0	LA,BA	Elective	
Ec17	Statistics		2	3	0	LA	Elective	
Ec18	Statistics	Ec17	2	3	0	LA	Elective	
Ec21	Economics		2	3	0	Eng	All	3
Ec22	Economics	Ec21	2	3	0	Eng	All	3
Ec61	Seminar		2	3	0	LA	Elective	
Ec62	Seminar	Ec61	2	3	0	LA	Elective	
Ec65	Thesis		3			LA	Elective	
Ec66	Thesis		3			LA	Elective	

*Education*

Ed1	History of Education		2	3	0	LA	Elective	
Ed2	History of Education		2	3	0	LA	Elective	
Ed3	Educ. Measurements		2	3	0	LA	Elective	
Ed4	Educ. Org. and Adm.		2	3	0	LA	Elective	
Ed7	Comparative Education		2	3	0	LA	Elective	
Ed9	Educ. Sociology		2	3	0	LA	Elective	
Ed10	Educ. Philosophy		2	3	0	LA	Elective	
Ed11	Principles of Secondary Education		2	3	0	LA	Elective	
Ed12	Methods of Teaching in Secondary Schools		2	3	0	LA	Elective	

*Electrical Engineering*

EL1	Electrical Eng. I	P2	1	2	0	Eng	III	2
EL2	Electrical Eng. I	EL1	1	2	0	Eng	III	2
EL5	Electrical Machinery	P2	4	4	4	Eng	I,II,V	2
EL6	Electrical Measurements	EL5	2½	3	3	Eng	II,V	3
EL9	Electrical Eng. II	P2	1½	3	0	Eng	III	3
EL10	Electrical Eng. II	M7	2	3	0	Eng	III	3
EL11	Electrical Eng. Lab.	EL2	1	0	3	Eng	III	3
EL12	Electrical Eng. Lab.	EL10	1	0	3	Eng	III	3
EL13	Elec. Measurements I		2½	4	0	Eng	III	3

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Electrical Engineering — Continued</i>								
EL14	Elec. Measurements II		2	3	0	Eng	III	3
EL17	Electrical Eng. III	EL10,M6	2	3	0	Eng	III	4
EL18	Electrical Eng. III		2	3	0	Eng	III	4
EL19	Electrical Testing Lab.	EL17	2	2	3	Eng	III	4
EL20	Electrical Testing Lab.	EL18,19	2	2	3	Eng	III	4
EL21	Electrophysics	M7	1	2	0	Eng	III	4
EL22	Electrophysics	EL21	2	3	0	Eng	III	4
EL23	Elec. Measurements Lab.		2	0	3	Eng	III	4
EL24	Adv. Measurements Lab.		2	0	3	Eng	III	4
EL25	Electrical Eng. IV	EL18	3	4	0	Eng	III	5
EL26	Electrical Eng. IV	EL25	3	4	0	Eng	III	5
EL27	Adv. Elec. Eng. Lab.	EL25	2	2	3	Eng	III	5
EL28	Adv. Elec. Eng. Lab.	EL26	2	2	3	Eng	III	5
EL29	Electrical Eng. V-A	EL22	2½	3	0	Eng	III	5
EL30	Electrical Eng. V-A	EL29	2½	3	0	Eng	III	5
EL31	Electrical Eng. V-B		2½	3	0	Eng	III	5
EL32	Electrical Eng. V-B	EL31	2½	3	0	Eng	III	5
EL33	Advanced Experimental Investigations		2	0	3	Eng	III	5
EL34	Advanced Experimental Investigations	EL33	2	0	3	Eng	III	5
<i>French</i>								
F1	Elementary French		3	5	0	LA	Elective	
F2	Elementary French	F1	3	5	0	LA	Elective	
F3	Intermediate French	F2	3	†	0	LA,BA	Elective	
F4	Intermediate French	F3	3	†	0	LA,BA	Elective	
F5	Advanced French	F4	3	†	0	LA	Elective	
F6	Advanced French	F5	3	†	0	LA	Elective	
F7	French Classicism	F6	2	3	0	LA	Elective	
F8	French Classicism	F7	2	3	0	LA	Elective	
F9	French Romanticism	F6	2	3	0	LA	Elective	
F10	French Romanticism	F9	2	3	0	LA	Elective	
<i>Banking and Finance</i>								
FI3	Business Finance		3	4	0	BA	All	2
FI4	Business Finance		3	4	0	BA	All	2
FI5	Corporation Finance		2	3	0	BA	All	3
FI6	Banking and Business		2	3	0	BA	All	3
FI8	Adv. Banking Problems		3	4	0	BA	II	4
FI9	Investments		3	4	0	BA	II	4
FI10	Investments		3	4	0	BA	II	4
FI12	Public Finance		2	3	0	BA	All	5
FI13	Real Estate Practice and Appraising		3½	4	0	BA	II	5
FI14	Insurance Principles and Practice		3½	4	0	BA	II	5
<i>German</i>								
G1	Elementary German		3	†	0	LA	Elective	
G2	Elementary German	G1	3	†	0	LA	Elective	
G3	Intermediate German	G2	3	4	0	LA	Elective	
G4	Intermediate German	G3	3	4	0	LA	Elective	
G5	Advanced German	G4	3	4	0	LA	Elective	

†NOTE: LA Elective for first year has 3 class hours; LA Elective, Upperclass, has 4 class hours; BA Elective in fourth year has 4 class hours.

‡NOTE: LA Elective for first year has 3 class hours; LA Elective, Upperclass, has 5 class hours.



No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>German — Continued</i>								
G6	Advanced German	G5	3	4	0	LA	Elective	
G7	Class. Per. of Ger. Lit.	G6	2	3	0	LA	Elective	
G8	Class. Per. of Ger. Lit.	G7	2	3	0	LA	Elective	
G9	Ger. Lit. of 19th Cent.	G6	2	3	0	LA	Elective	
G10	Ger. Lit. of 19th Cent.	G9	2	3	0	LA	Elective	
<i>Art</i>								
GA51	History of Art I		2	3	0	Eng	Elective	
GA52	History of Art II		2	3	0	Eng	Elective	
<i>Government</i>								
Gv1	Am. Govt. and Politics		3	3	0	{BA LA	All SocSci	1 1
Gv2	Am. Govt. and Politics		3	3	0	{BA LA	All SocSci	1 1
Gv3	Comparative Govt.		2	3	0	{LA BA	Soc & Econ Elective	3 3
Gv4	Comparative Govt.		2	3	0	{LA BA	Soc & Econ Elective	3 3
Gv5	Am. Const. Law		2	3	0	LA,BA	Elective	
Gv5-B	Constitutional Law		3	4	0	BA	V	4
Gv6	Am. Const. Law	Gv5	2	3	0	LA,BA	Elective	
Gv7	Origins of Political Theory		2	3	0	LA,BA	Elective	
Gv8	Modern Political Theory		2	3	0	LA,BA	Elective	
Gv51	Am. Const. Law		2	3	0	Eng	Elective	
<i>Geology</i>								
Gy1	General Geology		2	3	0	Eng	I	4
Gy2	General Geology	Gy1	2	3	0	Eng	I	4
Gy5	Historical Geology	Gy2	2	3	0	LA	Elective	
Gy6	Historical Geology	Gy5	2	3	0	LA	Elective	
Gy50	Geology		2	3	0	Eng,BA	Elective	
<i>History</i>								
H1	Hist. of Civilization		4	4	0	LA	SocSci	1
H2	Hist. of Civilization		4	4	0	LA	SocSci	1
H5	Europe 1789-1870		2	3	0	LA,BA	Elective	
H6	Europe 1870-1938		2	3	0	LA,BA	Elective	
H7	England to 1688		2	3	0	LA	English	3
H8	England since 1688		2	3	0	LA	English	3
H9	U. S. to 1865		2	3	0	LA,BA	Elective	
H10	U. S. since 1865		2	3	0	LA,BA	Elective	
H11	Latin Am. History		2	3	0	LA	Elective	
H12	Latin Am. History		2	3	0	LA	Elective	
H13	English Const. History		3	4	0	LA	Elective	
H14	American Const. History		3	4	0	LA	Elective	
<i>Industrial Administration</i>								
IA1	Industrial Mgt. I		2	3	0	BA	All	3
IA2	Industrial Mgt. II		2	3	0	BA	All	3
IA3	Personnel Administration		3	4	0	BA	IV	4
IA4	Personnel Problems		3	4	0	BA	IV	4
IA5	Motion and Time Study		3½	4	0	BA	IV	5
IA14	Industrial Finance		3½	4	0	BA	IV	5
<i>Industrial Engineering</i>								
IN3	Prod. Processes I		2½	4	0	Eng	II,III,V	2
IN4	Prod. Processes II		1½	2	0	Eng	II,III,V	2

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Industrial Engineering — Continued</i>								
IN5	Industrial Mgt. I		2	3	0	{Eng Eng	II,V I,IV	4 5
IN6	Industrial Mgt. II	IN5	2	3	0	Same as IN5		
IN7	Industrial Accounting		2	1	4	Eng	V	4
IN8	Industrial Accounting	IN7	2	1	4	Eng	V	4
IN9	Cost Accounting	IN8	2½	2	2	Eng	V	5
IN10	Cost Accounting	IN9	2½	2	2	Eng	V	5
IN11	Methods Engineering	IN6	2½	2	2	Eng	V	5
IN14	Industrial Finance		2½	3	0	Eng	V	5
IN15	Sales Engineering		2½	3	0	Eng	V	5
IN16	Personnel Administration		2	3	0	Eng	II,V	5
IN18	Sales Eng. Problems		2½	3	0	Eng	V	5
IN21	Contracts		2	3	0	Eng	II,V	5
IN23	Industrial Statistics		2½	2	2	Eng	V	4
IN24	Industrial Statistics		2½	2	2	Eng	V	4
IN25	Industrial Plants	ME23,30	2½	6	0	Eng	V	5
IN26	Industrial Plants	IN25	2½	6	0	Eng	V	5
<i>Business Law</i>								
L1	Legal Bases of Business		3	3	0	BA	All	1
L2	Business Associations		4	4	0	BA	All	1
L5	Legal Aspects I		2	3	0	BA	All	5
L6	Legal Aspects II		2	3	0	BA	All	5
<i>Mathematics</i>								
M1	College Algebra		3	3	0	{Eng LA	All App & Pure Sci	1 1
M3	Trigonometry		2	2	0	Same as M1		
M4	Analytic Geometry and Intro. to Calculus	M1,3	5	5	0	Same as M1		
M5	Differential Calculus	M1,4	3	4	0	{Eng LA	All Math&Phys, Chem	2 2
M6	Integral Calculus	M5	3	4	0	Same as M5		
M7	Differential Equations I	M6	2½	4	0	{Eng LA	III,IV Math&Phys	3 3
M8	Differential Equations II	M6,7	3	4	0	LA	Math&Phys	
M9	Higher Algebra	M1,4	3	4	0	LA	Elective	
M10	Curve Analysis	M5	3	4	0	LA	Elective	
M11	Solid Anal. Geom.	M4	3	4	0	LA	Elective	
M12	Modern Geometry	M4	3	4	0	LA	Elective	
M13	Spherical Trig.	M3	3	4	0	LA	Elective	
M14	Hist. of Math.		2	3	0	LA	Elective	
M15	Advanced Calculus	M6	3	4	0	LA	Elective	
M16	Advanced Calculus	M15	3	4	0	LA	Elective	
M17	Series	M6	3	4	0	LA	Math&Phys	3
M18	Theory of Equations	M5	3	4	0	LA	Math&Phys	3
<i>Marketing and Advertising</i>								
MA1	Marketing Principles		3	4	0	BA	All	3
MA2	Marketing Problems		3	4	0	BA	All	3
MA3	Sales Management		3	4	0	BA	III	4
MA4	Sales Management		3	4	0	BA	III	4
MA5	Advertising Principles		3	4	0	BA	III,VI	4
MA6	Advertising Problems		3	4	0	BA	III,VI	4
MA7	Retail Store Mgt.		3½	4	0	BA	III	5
MA8	Retail Merchandising		3½	4	0	BA	III	5

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<b>Mechanical Engineering</b>								
ME1	Mechanism		3	6	0	Eng	II & V	3
ME15	Industrial Plants	ME23,32	2½	6	0	Eng	II-Elective	5
ME16	Industrial Plants	ME15	2½	6	0	Eng	II-Elective	5
ME20	Applied Mech. (Statics)	P1	3	4	0	Eng	All	2
ME21	Applied Mech. (Kinetics)	ME20	3	4	0	Eng	All	3
ME22	Strength of Materials	ME20,21,P4	3	4	0	Eng	All	3
ME23	Strength of Materials	ME22	2	3	0	Eng	I,II,V	4
ME24	Advanced Mechanics	ME23	2	3	0	Eng	I,II	4
ME27	Metallography	IN3	2	3	0	Eng	II	4
ME29	Heat Eng. (Power Pl't Eq.)		2	3	0	Eng	II & V	3
ME30	Heat Eng. (Thermo.)	P4	3	4	0	Eng	II,IV,V	3
ME31	Heat Engineering	ME30,29	2½	4	0	Eng	II	4
ME32	Heat Engineering	ME31	2½	4	0	Eng	II	4
ME33	Refrigeration	ME32	2	3	0	Eng	II-Elective	5
ME34	Steam Turbines	ME31	2	3	0	Eng	II-Elective	5
ME35	Heat Engineering	P4	2	3	0	Eng	I	3
ME36	Heat Engineering	ME35	2½	2	3	Eng	III	4
ME37	Diesel Engines	ME32	2	3	0	Eng	II-Elective	5
ME38	Diesel Lab.	ME37	2	1	3	Eng	II-Elective	5
ME39	Engine Dynamics	ME21	2½	4	0	Eng	II-Elective	5
ME40	Aerodynamics	ME21,CII2	2	3	0	Eng	II-Elective	4
ME42	Heating and Air Con- ditioning	ME21,CII2	2	3	0	Eng	II-Elective, V	4
ME44	Power Plant Eng.	ME32	2½	4	0	Eng	II	5
ME45	Air Cond. Design	ME42	2½	6	0	Eng	II-Elective	5
ME46	Air Cond. Design	ME45	2½	6	0	Eng	II-Elective	5
ME48	Air Cond. Lab.	ME45	2	1	3	Eng	II-Elective	5
ME51	Machine Design	ME24	3	6	0	Eng	II	5
ME52	Machine Design	ME51	3	6	0	Eng	II	5
ME54	Diesel Eng. Design	ME39	2½	6	0	Eng	II-Elective	5
ME61	Mechanical Eng. Lab.	ME29,31	2	0	4	Eng	II & V	4
ME62	Mechanical Eng. Lab.	ME32,61	2	0	4	Eng	II & V	4
ME63	Mechanical Eng. Lab.	ME32,62	2½	1	3	Eng	II	5
ME69	Testing Materials Lab.	ME22	1½	1	3	Eng	I & III	4
ME70	Testing Materials Lab.	ME69	1½	1	3	Eng	I	4
ME73	Aircraft Structures	ME23	2	3	0	Eng	II-Elective	5
ME74	Aeronautical Lab.	ME40	2	1	3	Eng	II-Elective	5
ME76	Aircraft Eng. Design	ME39	2½	6	0	Eng	II-Elective	5

**Physics**

P1-A	Survey of Physical Sciences		4	4	0	{ LA BA	Soc Sci Elective All	1 1
P2-A	Survey of Physical Sciences		4	4	0	Same as P1-A		
P1	Physics I		3	3	0	{ Eng LA	All App & Pure Sci	1 1
P2	Physics I		3	3	0	Same as P1		
P3	Physics II	P1,2	2	3	0	{ Eng LA	All Math&Phys, Chem	2 2
P4	Physics II	P1,2	2	3	0	{ Eng LA	All Math&Phys, Chem	2 2

No.	Course	Pre-requisite	Sem. Class Lab. Hrs. Hrs. Hrs.			College	Curriculum	Yr.
Physics — Continued								
P5	Physics Laboratory	P1,2	1	0	2	{ Eng LA	I,II,IV,V Math&Phys, Chem	2 2
P6	Physics Laboratory	P1,2	1	0	2	{ Eng LA	I,II,IV,V Math&Phys, Chem	2 2
P7	Physics Laboratory	P1,2	2	4	0	Eng	III	2
P8	Physics Laboratory	P1,2	2	4	0	Eng	III	2
P9	Optics	P3,M6	3	3	2	LA	Math&Phys	3
P10	Optics	P9	3	3	2	LA	Math&Phys	3
P13	Acoustics	P3,M6	3	3	2	LA	Elective	
P14	Acoustics	P13	3	3	2	LA	Elective	
P15	Modern Physics	P4,M7	3	3	2	LA	Elective	
P16	Modern Physics	P15	3	3	2	LA	Elective	
P65	Thesis		3			LA	Elective	
P66	Thesis		3			LA	Elective	
P101	Theoretical Physics		3			LA	Graduate	
P102	Theoretical Physics		3			LA	Graduate	
P103	Quantum Mechanics		3			LA	Graduate	
P104	Quantum Mechanics		3			LA	Graduate	
P105	Applied Mathematics		3			LA	Graduate	
P106	Applied Mathematics		3			LA	Graduate	
P107	Graduate Thesis		2-4			LA	Graduate	
P108	Graduate Thesis		2-4			LA	Graduate	
P109	Graduate Thesis		2-4			LA	Graduate	
P110	Graduate Thesis		2-4			LA	Graduate	
Public Administration								
PA2	Public Administration I		3	4	0	BA	V	4
PA4	Political Concepts		3	4	0	BA	V	4
PA5	Bus. and Govt.		2	3	0	BA	All	5
PA7	Public Administration II		3	4	0	BA	V	5
PA8	Public Administration III		3	4	0	BA	V	5
Physical Education								
PE1	Hygiene		1	1	0	All	All	1
PE5	Prin. of Phys. Ed.		2	3	0	LA	Elective	
PE6	Play and Recreation		2	3	0	LA	Elective	
PE7	Hist. of Phys. Ed.		2	3	0	LA	Elective	
PE8	Admin. of Phys. Ed.		2	3	0	LA	Elective	
PE9	Football		2	3	0	LA	Elective	
PE11	Track and Field Events		2	3	0	LA	Elective	
PE12	Basketball and Baseball		2	3	0	LA	Elective	
Philosophy								
Ph1	Intro. to Philosophy		2	3	0	LA	Elective	
Ph2	Problems of Philosophy		2	3	0	LA	Elective	
Ph3	History of Philosophy		2	3	0	LA	Elective	
Ph4	History of Philosophy		2	3	0	LA	Elective	
Ph5	Philosophy of Religion		2	3	0	LA	Elective	
Ph6	Logic		2	3	0	LA	Elective	
Ph50	Philosophy		2	3	0	Eng,BA	Elective	
Psychology								
Ps1	Intro. to Diff. Psych.		2	3	0	LA	{ Engl,SS, Biol,M&P	2
Ps2	General Psychology	Ps1	2	3	0	LA	{ Engl,SS, Biol,M&P	2
Ps1-B	Psychology		2	3	0	BA	All	2



No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Psychology — Continued</i>								
Ps2-B	Psychology		2	3	0	BA	All	2
Ps3	Experimental Psychology	Ps2	3	4	0	LA	Elective	
Ps4	Differential Psychology	Ps3	3	4	0	LA	Elective	
Ps5	Educ. Psychology	Ps2	2	3	0	LA	Elective	
Ps6	Educ. Psychology	Ps5	2	3	0	LA	Elective	
Ps7	Soc. Psych. of Everyday Life	Ps2	2	3	0	LA,BA	Elective	
Ps8	Soc. Psych. Theory and Methods	Ps7	2	3	0	LA,BA	Elective	
Ps9	Psych. of Personality	Ps2	2	3	0	LA	Elective	
Ps10	Abnormal Psychology	Ps9	2	3	0	LA	Elective	
Ps11	Applied Psychology	Ps9	2	3	0	LA	Elective	
Ps13	Psychological Testing	Ps4	2	3	0	LA	Elective	
Ps14	Advanced Experimental Laboratory	Ps3	2	3	0	LA	Elective	
Ps50	General Psychology		2	3	0	Eng	Elective	
Ps61	Seminar							
Ps62	Seminar	Ps61	2	3	0	LA	Elective	
<i>Sociology</i>								
S1	Intro. to Sociology		2	3	0	{ Eng BA LA	All Elective Engl & Soc Sci	4 3 2
S2	Principles of Sociology		2	3	0	Same as S1		
S3	Social Problems	S1,2	2	3	0	LA,BA	Elective	
S4	Social Pathology	S1,2	2	3	0	LA,BA	Elective	
S5	Criminology	S1,2	2	3	0	LA	Elective	
S6	Penology	S5	2	3	0	LA	Elective	
S7	Prin. of Social Ethics	S1,2	2	3	0	LA,BA	Elective	
S8	Probs. in Social Ethics	S7	2	3	0	LA,BA	Elective	
S9	The Family	S1,2	2	3	0	LA	Elective	
S10	The Family	S9	2	3	0	LA	Elective	
S11	Social Control	S3,4,Ph2	2	3	0	LA,BA	Elective	
S12	Social Progress	S11	2	3	0	LA,BA	Elective	
S13	Population Problems	S1,2	2	3	0	LA	Elective	
S14	Urban Sociology	S1,2	2	3	0	LA,BA	Elective	
S15	History of Sociological Thought	S3,4,Ph2	2	3	0	LA	Elective	
S16	Sociology of Religion	S3,4	2	3	0	LA	Elective	
S50	The Family		2	3	0	Eng,BA	Elective	
S61	Seminar		2	3	0	LA	Elective	
S62	Seminar	S61	2	3	0	LA	Elective	
S65	Thesis		3			LA	Elective	
S66	Thesis		3			LA	Elective	
<i>Spanish</i>								
Sp1	Elementary Spanish		3	5	0	LA	Elective	
Sp2	Elementary Spanish	Sp1	3	5	0	LA	Elective	
Sp3	Intermediate Spanish	Sp2	3	4	0	LA	Elective	
Sp4	Intermediate Spanish	Sp3	3	4	0	LA	Elective	
<i>Unclassified</i>								
U4	Business Policy		2	3	0	BA	All	5
U50	Contracts		2	3	0	Eng	Elective	
	Orientation		0	1	0	All	All	1
	Physical Training		0	2	0	All	All	1
	Thesis (see page 121.)							

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OFFICE HOURS

DEPARTMENT OF ADMISSIONS

9 A.M. to 4 P.M. daily

Saturday 12.00 N'N

Wednesday Evenings by

Appointment

Northeastern University

College of Engineering

Paste a Sm

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in This Sp

APPLICATION FOR ADMISSION

(A non-returnable fee of five dollars must accompany this application. Make checks, money orders, or drafts payable to Northeastern University)

Boston, Mass.....19

To Director of Admissions:

I (Please print name in full) .....

hereby respectfully apply for admission to the

- ☐ Civil
- ☐ Mechanical
- ☐ Electrical
- ☐ Chemical
- ☐ Industrial

Engineering Curriculum of the College of Engineering for the school period beginning.....19....

NOTE: The applicant should fill out the following form (both sides) with care.

Residence.....Street

Town or City.....

State.....Tel.....

Date of Birth.....Age.....

Place of Birth.....

Race.....Religion.....Nationality.....

Graduate of.....High School, Year.....

Location of High School.....

Name of Principal .....

Other high schools you have attended.....

Names of Principals.....

If not a graduate, state the years of attendance and why you left.....

.....

Father's, Mother's, or Guardian's Name.....

.....

Address.....

Father's work, business or profession.....

Names and addresses of two other persons, to whom we may direct inquiries concerning you.

.....

.....

(OVER)

Weight.....Height.....

Have you any physical infirmities? Explain, if any.....

.....

.....

.....

Defects of speech.....

Defects of hearing.....

Defects of sight.....

Bodily infirmities.....

Is your general health good, fair, or poor?.....

Have you done collegiate work elsewhere?.....

If so, name and address of college or university.....

.....

.....

Name of person who will furnish transcript of your college record.....

.....

.....

Do you expect advance credit for past collegiate work?.....

.....

List all athletics and other extra curricula high school activities you

have engaged in.....

.....

.....

Names and addresses of all past employers with brief description of

each job, length of employment, and wages received.....

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.....

.....

### Declaration of Parent or Guardian

This application has been read by me and has my approval.

.....

Signature of Parent or Guardian

Date . . . . .

Milton J. Schlagenhauf, Director of Admissions  
Northeastern University  
360 Huntington Avenue  
Boston, Mass.

Dear Sir:

Please send me additional information on the following points:

. . . . .

. . . . .

. . . . .

. . . . .

. . . . .

. . . . .

. . . . .

. . . . .

Name . . . . .

Street and Number . . . . .

Town or City . . . . .

State . . . . .





# NORTHEASTERN UNIVERSITY

## COLLEGE OF LIBERAL ARTS

Offers a broad program of college subjects serving as a foundation for the understanding of modern culture, social relations, and technical achievement. Varied opportunities available for vocational specialization. Degree: Bachelor of Science or Bachelor of Arts.

## COLLEGE OF ENGINEERING

Offers curricula in Civil, Mechanical (with Air-Conditioning and Aeronautical options), Electrical, Chemical, and Industrial Engineering. Class room study is supplemented by experiment and research in well-equipped laboratories. Degree: Bachelor of Science in the professional field of specialization.

## COLLEGE OF BUSINESS ADMINISTRATION

Offers six curricula: Accounting, Banking and Finance, Marketing and Advertising, Industrial Administration, Journalism, and Public Administration. Each curriculum represents in itself a broad survey of business technique, differing from the others chiefly in emphasis. Degree: Bachelor of Science in Business Administration.

---

## SCHOOL OF LAW

Offers day and evening undergraduate programs admitting those who present a minimum of two years of college work, each program leading to the degree of Bachelor of Laws. Also graduate program in the evening leading to the degree of Master of Laws. Co-educational.

## SCHOOL OF BUSINESS

Offers curricula through evening classes leading to the degree of Bachelor of Business Administration with appropriate specification in Accounting, Management (with Industrial and Merchandising options), and Engineering and Business or the degree of Bachelor of Commercial Science in Law and Business Management. Preparation for C.P.A. examinations. Shorter programs arranged to meet special needs. Co-educational.

## EVENING COURSES OF THE COLLEGE OF LIBERAL ARTS

Certain courses of the College of Liberal Arts are offered during evening hours, affording concentration in Economics, English, History and Government, or Social Science. A special program preparing for admission to the School of Law is also available. The program is equivalent in hours to one-half the requirement for the A.B. or S.B. degree. Associate in Arts title conferred. Co-educational.

---

The Colleges of Liberal Arts, Engineering, and Business Administration offer day programs for men only and are conducted on the co-operative plan. After the freshman year, students may alternate their periods of study with periods of work in the employ of business or industrial concerns at ten-week intervals. Under this plan they gain valuable experience and earn a large part of their college expenses.

---

In addition to the above schools the University has affiliated with it and conducts: the Lincoln Technical Institute offering, through evening classes, courses of college grade in various fields of engineering leading to the title of Associate in Engineering; and the Lincoln Preparatory School, an accredited evening school preparing for college entrance and offering other standard high school programs.

---

For further information regarding any of the above schools, address

NORTHEASTERN UNIVERSITY

Law School	Other Schools
47 Mt. Vernon Street	360 Huntington Avenue
Boston, Massachusetts	
Telephone: KENmore 5800	



# Northeastern University

## COLLEGE OF BUSINESS ADMINISTRATION

1942-1943



BOSTON, MASSACHUSETTS

January, 1942

## GIFTS AND BEQUESTS

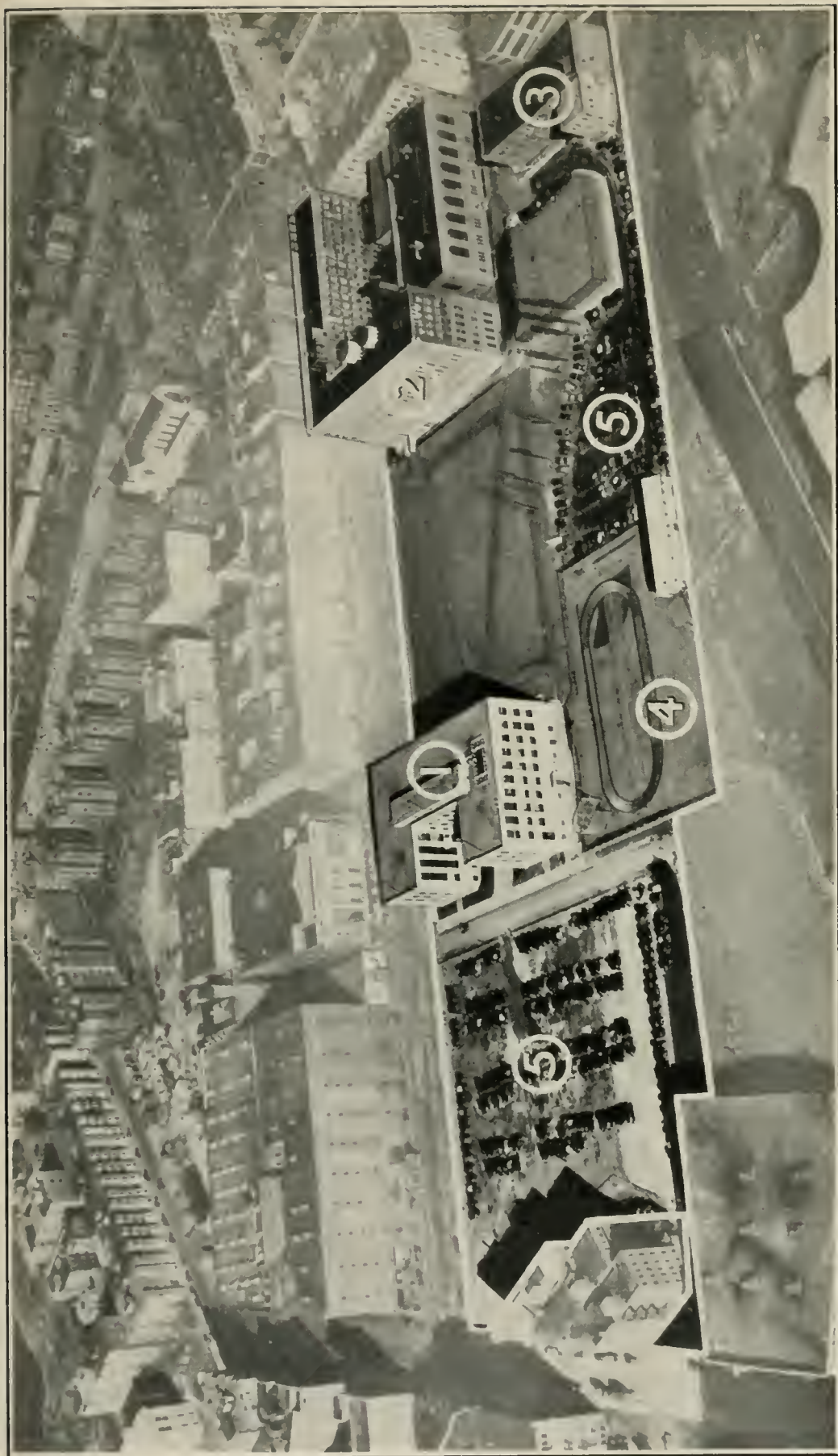
Northeastern University will welcome gifts and bequests for the following purposes:

- (a) For its building program
- (b) For general endowment
- (c) For specific purposes which may especially appeal to the donor.

It is suggested that, when possible, those contemplating gifts or bequests confer with the President of the University regarding the University's needs before legal papers are drawn.

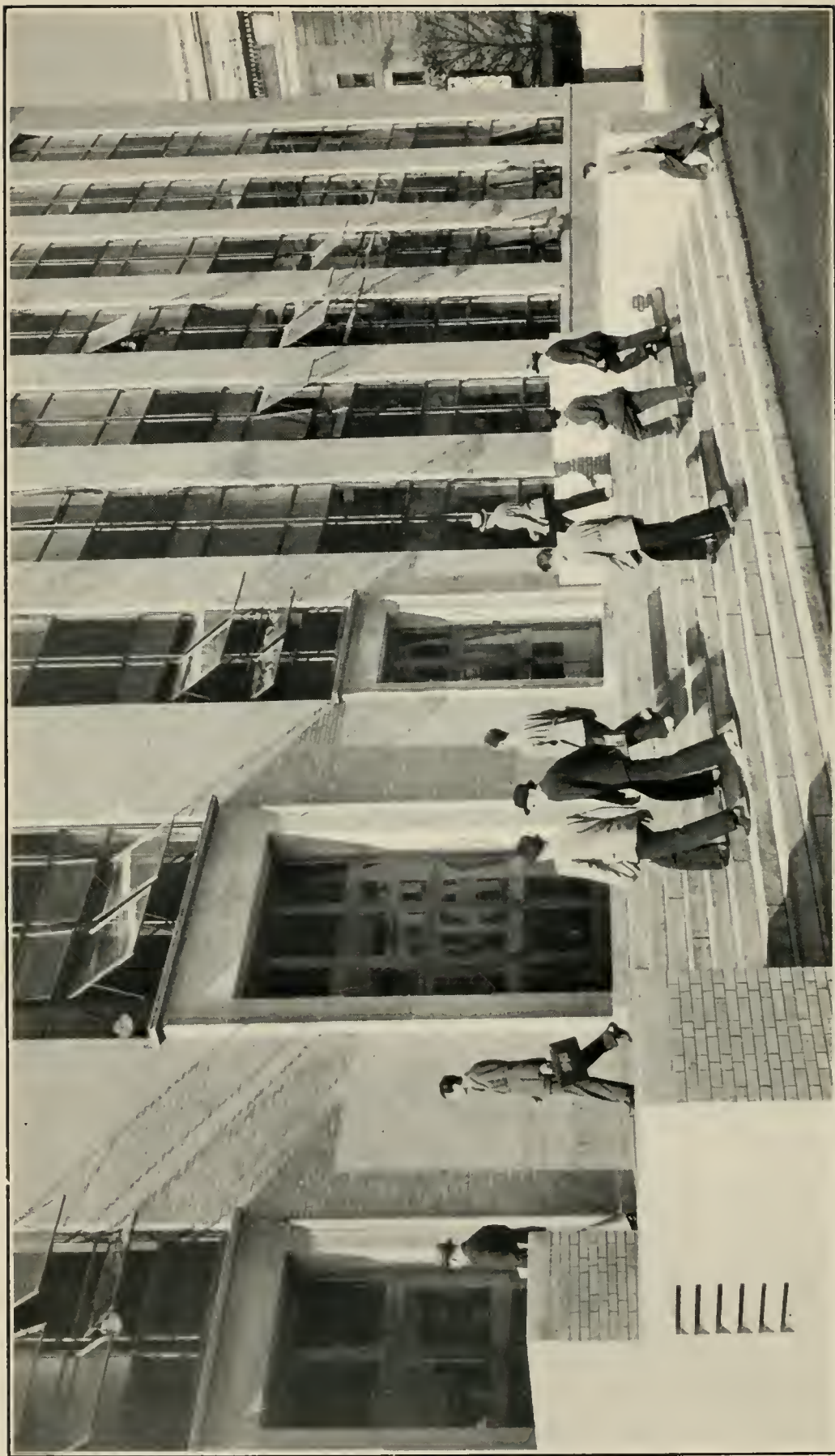
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## NORTHEASTERN UNIVERSITY

- 1. Richards Hall
- 2. East Building
- 3. South Building
- 4. Outdoor Gymnasium
- 5. University Parking Areas



RICHARDS HALL



# NORTHEASTERN UNIVERSITY

## *College of Business Administration*

*Conducted on the Co-operative Plan*

### *Catalogue*

1942-1943

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# Freshman Calendar, 1942-1943

## SEPTEMBER

S	M	T	W	T	F	S
		①	②	③	④	⑤
⑥	⑦	⑧	⑨	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

## OCTOBER

S	M	T	W	T	F	S
				1	2	3
④	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

## NOVEMBER

S	M	T	W	T	F	S
①	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

## DECEMBER

S	M	T	W	T	F	S
		1	2	3	4	5
⑥	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

## JANUARY

S	M	T	W	T	F	S
					①	②
③	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

## FEBRUARY

S	M	T	W	T	F	S
	1	2	3	4	5	6
⑦	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

## MARCH

S	M	T	W	T	F	S
	1	2	3	4	5	6
⑦	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

## APRIL

S	M	T	W	T	F	S
				1	2	3
④	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

## MAY

S	M	T	W	T	F	S
						1
②	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

## JUNE

S	M	T	W	T	F	S
		①	②	③	④	⑤
⑥	⑦	⑧	⑨	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

## JULY

S	M	T	W	T	F	S
				①	②	③
④	⑤	⑥	⑦	⑧	⑨	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

## AUGUST

S	M	T	W	T	F	S
①	②	③	④	⑤	⑥	⑦
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Days on which college exercises are held are indicated thus: **1 2 3**

Sundays, holidays, and vacations are indicated thus: ① ② ③



# Upperclass Calendar, 1942-1943

## SEPTEMBER

S	M	T	W	T	F	S
		①	②	③	④	⑤
⑥	⑦	⑧	⑨	⑩	⑪	⑫
⑬	14	15	16	17	18	19
⑳	21	22	23	24	25	26
㉑	28	29	30			

## OCTOBER

S	M	T	W	T	F	S
				1	2	3
④	5	6	7	8	9	10
⑪	⑫	13	14	15	16	17
⑱	19	20	21	22	23	24
㉑	26	27	28	29	30	31

## NOVEMBER

S	M	T	W	T	F	S
①	2	3	4	5	6	7
⑧	9	10	11	12	13	14
⑱	16	17	18	19	20	21
㉑	<b>23</b>	<b>24</b>	<b>25</b>	㉒	<b>27</b>	<b>28</b>
㉓	<b>30</b>					

## DECEMBER

S	M	T	W	T	F	S
		1	2	3	4	5
⑥	7	8	9	10	11	12
⑬	14	15	16	17	18	19
⑳	21	22	23	24	㉑	㉒
㉓	28	29	30	31		

## JANUARY

S	M	T	W	T	F	S
					①	②
③	4	5	6	7	8	9
⑩	11	12	13	14	15	16
⑱	18	19	20	21	22	23
㉒	25	26	27	28	29	30
㉓						

## FEBRUARY

S	M	T	W	T	F	S
	1	2	3	4	5	6
⑦	8	9	10	11	12	13
⑭	15	16	17	18	19	20
㉑	㉒	23	24	25	26	27
㉓						

## MARCH

S	M	T	W	T	F	S
	1	2	3	4	5	6
⑦	8	9	10	11	12	13
⑭	15	16	17	18	19	20
㉑	22	23	24	25	26	27
㉒	29	30	31			

## APRIL

S	M	T	W	T	F	S
				1	2	3
④	5	6	7	8	9	10
⑪	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>
⑱	⑱	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
㉑	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	

## MAY

S	M	T	W	T	F	S
						1
②	3	4	5	6	7	8
⑨	10	11	12	13	14	15
⑱	17	18	19	20	21	22
㉑	24	25	26	27	28	29
㉒	㉓					

## JUNE

S	M	T	W	T	F	S
		1	2	3	4	5
⑥	7	8	9	10	11	12
⑬	14	15	16	17	18	19
㉒	㉑	㉒	㉓	㉔	㉕	㉖
㉗	㉘	㉙	㉚			

## JULY

S	M	T	W	T	F	S
				①	②	③
④	⑤	⑥	⑦	⑧	⑨	⑩
⑪	⑫	⑬	⑭	⑮	⑯	⑰
⑱	⑲	⑳	㉑	㉒	㉓	㉔
㉕	㉖	㉗	㉘	㉙	㉚	㉛

## AUGUST

S	M	T	W	T	F	S
①	②	③	④	⑤	⑥	⑦
⑧	⑨	⑩	⑪	⑫	⑬	⑭
⑮	⑯	⑰	⑱	⑲	⑳	㉑
㉒	㉓	㉔	㉕	㉖	㉗	㉘
㉙	㉚	㉛				

Days on which Division A students are in college are indicated thus: 1 2 3

Days on which Division B students are in college are indicated thus: **1 2 3**

Sundays, holidays, and summer periods are indicated thus: ① ② ③

## *Calendar for the College Year, 1942-1943*

1942

- SEPTEMBER 2 *Wednesday.* Entrance condition examinations.
- SEPTEMBER 7 *Monday.* Labor Day. (College exercises omitted.)
- SEPTEMBER 10 *Thursday.* Registration and opening of college for freshmen. Students failing to register promptly on September 10 will be charged a late registration fee of five dollars (\$5.00).
- SEPTEMBER 14 *Monday.* Opening of college for Division A upperclassmen. Co-operative work period begins for Division B upperclassmen.
- OCTOBER 12 *Monday.* Columbus Day. (College exercises omitted.)
- NOVEMBER 23 *Monday.* Opening of college for Division B upperclassmen. Co-operative work period begins for Division A upperclassmen.
- NOVEMBER 25 *Wednesday.* College exercises omitted after 1:00 p.m.
- NOVEMBER 26 *Thursday.* Thanksgiving Day. (College exercises omitted.)
- DECEMBER 21 }  
JANUARY 2 } Vacation for freshmen.
- DECEMBER 24 *Thursday.* College exercises omitted after 1:00 p.m.
- DECEMBER 25 } *Friday and Saturday.* Celebration of Christmas.  
DECEMBER 26 } (College exercises omitted.)

1943

- JANUARY 1 } *Friday and Saturday.* Celebration of New Year's  
JANUARY 2 } *Day.* (College exercises omitted.)
- FEBRUARY 1 *Monday.* Second semester begins for freshmen  
and Division A upperclassmen. Co-operative  
work period begins for Division B upperclassmen.
- FEBRUARY 22 *Monday.* Washington's Birthday. (College ex-  
ercises omitted.)
- APRIL 10 *Saturday.* College year ends for Division A  
upperclassmen.
- APRIL 12 *Monday.* Second semester begins for Division B  
upperclassmen. Co-operative work period begins  
for Division A upperclassmen.
- APRIL 19 *Monday.* Patriots' Day. (College exercises omit-  
ted.)
- MAY 29 *Saturday.* College year ends for freshmen.
- MAY 31 *Monday.* Observation of Memorial Day. (College  
exercises omitted.)
- JUNE 19 *Saturday.* College year ends for Division B  
upperclassmen.
- SEPTEMBER 6 *Monday.* Labor Day. (College exercises omitted.)
- SEPTEMBER 9 *Thursday.* Registration and opening of college  
for freshmen. Students failing to register promptly  
on September 9 will be charged a late registration  
fee of five dollars (\$5.00).
- SEPTEMBER 13 *Monday.* Opening of college year 1943-1944.

# The University Corporation

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*Vice-Chairman*

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ALBERT MORTON CREIGHTON  
ERNEST BLANEY DANE  
WILLIAM JAMES DAVIDSON  
JAMES DEAN  
PAUL AUGUSTUS DRAPER  
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LINDSAY ELLMS  
JOSEPH BUELL ELY  
JOHN WELLS FARLEY  
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ALLAN FORBES  
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HENRY INGRAHAM HARRIMAN  
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MAYNARD HUTCHINSON  
ARTHUR STODDARD JOHNSON

HALFDAN LEE  
EDWARD ABBOTT MACMASTER  
JOHN RUSSELL MACOMBER  
JOSEPH PATRICK MANNING  
HAROLD FRANCIS MASON  
JAMES FRANKLIN McELWAIN  
HUGH DEAN McLELLAN  
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HARRY WENDELL PROUT  
SIDNEY RABINOVITZ  
STUART CRAIG RAND  
JAMES LORIN RICHARDS  
CHARLES MILTON ROGERSON  
ROBERT BILLINGS RUGG  
LEVERETT SALTONSTALL  
FRANK PALMER SPEARE  
RUSSELL HENRY STAFFORD  
FRANCIS ROBERT CARNEGIE STEELE  
CHARLES STETSON  
EARL PLACE STEVENSON  
ROBERT TREAT PAINE STORER  
FRANK HORACE STUART  
EDWARD WATSON SUPPLE  
MAHLON EDWARD TRAYLOR  
BAYARD TUCKERMAN, JR.  
ELIOT WADSWORTH  
EUSTIS WALCOTT  
EDWIN SIBLEY WEBSTER  
SINCLAIR WEEKS



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GALEN DAVID LIGHT

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JOHN BUTLER PUGSLEY

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CHARLES HENRY SAMPSON

ASA SMALLIDGE KNOWLES

MILTON JOHN SCHLAGENHAUF

WILFRED STANLEY LAKE

SYDNEY KENNETH SKOLFIELD

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EBEN OSWELL SMITH

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MILTON JOHN SCHLAGENHAUF

GALEN DAVID LIGHT

WILLIAM CROMBIE WHITE

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ASA SMALLIDGE KNOWLES

MYRA EDNA WHITE

WILFRED STANLEY LAKE

WILLIAM CROMBIE WHITE

RUSSELL WHITNEY

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FRANK PALMER SPEARE, M.H., LL.D.	<i>President Emeritus</i> Res. 90 Commonwealth Ave., Boston
EVERETT AVERY CHURCHILL, A.B., Ed.D. Office 138 Richards Hall	<i>Vice President of the University</i> Res. 48 Long Ave., Belmont
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ARTHUR ANDREW VERNON, S.B., M.S., Ph.D. Office 425 Richards Hall	<i>Director of Graduate Study</i> Res. 14 Standish St., Newton Hlds.

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WILLIAM THOMAS CLONEY, JR., A.B. Office 354 Richards Hall	<i>Director of the Publicity Bureau</i> Res. 30 Lantern Lane, Milton
ALBERT ELLSWORTH EVERETT, S.B., M.B.A. Office 253 Richards Hall	<i>Co-ordinator of Co-operative Work</i> Res. 4 Crown St., Auburndale
DAISY MILNE EVERETT Office 115 Richards Hall	<i>Assistant Treasurer</i> Res. 1095 Highland Ave., Needham Heights

GEORGE RAYMOND FENNELL, S.B., M.B.A. Office 150 Richards Hall	Assistant Director of Admissions Res. 42 Fremont Ave., Everett Telephone: Everett 1172-W
MARY B. FOOR Office 41 Richards Hall	Manager of Bookstore Res. 32 Milton Rd., Brookline
CHARLES WILLIAM HAVICE, A.B., M.A., S.T.B., Ph.D. Office 357 Richards Hall	Dean of Chapel Res. 83 Franklin St., So. Braintree
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PHYLLIS CHAMBERS HOWE Library, East Building	Assistant Librarian Res. 52 Westland Ave., Boston
HENRY ARTHUR KONTOFF, M.D. Office 479 Beacon St., Boston	College Physician Res. Overlook Park, Newton Centre
DONALD HERSHEY MACKENZIE, S.B., Ed.M. Office 355 Richards Hall	Assistant to the Director of Student Activities Res. 34 Exeter St., Wollaston
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VERNER OLOF NELSON Office 105 South Building	Co-ordinator of Co-operative Work Res. 60 Birchcliff Rd., East Weymouth
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ELLIS MERTON PURINTON, B.B.A. Office 253 Richards Hall	Co-ordinator of Co-operative Work Res. 7 Clark Ave., Beverly
J. KENNETH STEVENSON, B.C.S. Office 136 Richards Hall	Assistant to the Vice President Res. 101 Goden St., Belmont
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CYNTHIA WORT Library, East Building	Assistant Librarian Res. 82 Thorndike St., Brookline

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MILDRED CURTIS GARFIELD Financial Secretary to the Director of Day Colleges—152R	87 St. Stephen St., Boston
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DOROTHY MILNE MURRAY Secretarial Assistant—152R	204 Fair Oak Park, Needham
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MADelyn EDYTHE RALPH Secretary to the Director of Day Colleges—152R	42 Sylvan Circle, Lynnfield
PHYLLIS E. WALTER Secretary to the Dean of the College of Liberal Arts—452E	45 Carlton St., Brookline
CHARLOTTE WATERMAN Office of the Director of the Development Program—139R	18 Ethel St., Roslindale



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# Instructional Staff of the College of Business Administration

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Office 100 South Building	Res. 12 Elliott St., Winthrop
ALFRED D'ALESSANDRO, B.C.S., LL.B., C.P.A., M.B.A.	<i>Professor of Accounting</i>
Office 350 East Building	Res. 46 Radcliffe Rd., Belmont
STANLEY GODDARD ESTES, A.B., M.A., Ph.D.	<i>Professor of Psychology</i>
Office 256 Richards Hall	Res. 60 Pinckney St., Boston
CHARLES WILLIAM HAVICE, A.B., M.A., S.T.B., Ph.D.	<i>Professor of Sociology and Dean of Chapel</i>
Office 357 Richards Hall	Res. 83 Franklin St., South Braintree
JULIAN ERNEST JACKSON, A.B., LL.B., M.B.A.	<i>Professor of Business Law and Management</i>
Office 350 East Building	Res. 187 Woodcliff Rd., Newton Highlands
ASA SMALLIDGE KNOWLES, A.B., M.A.	<i>Professor of Industrial Administration</i>
Office 352 East Building	Res. 41 Louise Rd., Belmont
WILFRED STANLEY LAKE, A.B., M.A., Ph.D.	<i>Professor of Economics</i>
Office 452 East Building	Res. 59 Hinckley Rd., Waban
HAROLD WESLEY MELVIN, A.B., M.A.	<i>Professor of English</i>
Office 256 Richards Hall	Res. 44 Houston Ave., Milton
STANLEY DEMETRIUS MIROYIANNIS, S.B., M.A., Ph.D.	<i>Professor of Biology</i>
Office 209 South Building	Res. 8 Cumberland St., Boston
WINTHROP ELIOT NIGHTINGALE, A.B., S.B., Ed.M.	<i>Professor of Co-ordination</i>
Office 253 Richards Hall	Res. 136 Dickerman Rd., Newton Highlands
EDWARD SNOW PARSONS, S.B., Ed.M.	<i>Professor of Physical Education</i>
Office 355 Richards Hall	Res. 19 Hardy Ave., Watertown
JOHN BUTLER PUGSLEY, A.B.	<i>Professor of Geology</i>
Office 254 Richards Hall	Res. 23 Hardy Ave., Watertown
MILTON JOHN SCHLAGENHAUF, A.B., B.D., M.A.	<i>Professor of Economics</i>
Office 150 Richards Hall	Res. 96 Blakely Rd., Medford

## Associate Professors

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Office 363 East Building	Res. 1367 Walnut St., Newton Highlands
FREDERICK WILLIAM HOLMES, A.B., M.A.	<i>Associate Professor of English</i>
Office 453 East Building	Res. 43 Lincoln St., Dedham

## Assistant Professors

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Office 352 Richards Hall	Res. 30 Lantern Lane, Milton
ELMER H. CUTTS, A.B., M.A., Ph.D.	<i>Assistant Professor of History and Government</i>
Office 363 East Building	Res. 387 Harvard St., Cambridge
ALBERT ELLSWORTH EVERETT, S.B., M.B.A.	<i>Assistant Professor of Co-ordination</i>
Office 253 Richards Hall	Res. 4 Crown St., Auburndale

GEORGE RAYMOND FENNEL, S.B., M.B.A.	Assistant Professor of Marketing
Office 150 Richards Hall	Res. 42 Fremont Ave., Everett
CARL DAVID JOHNSON, A.B., M.A.	Assistant Professor of Physics
Office 350 East Building	Res. 24 Lunt St., Norfolk Downs
ROBERT ALTON JOHNSTON, A.B., M.B.A.	Assistant Professor of Marketing
Office 350 East Building	Res. 96 High St., South Hanson
ALBERT J. LYND, A.B., A.M.	Assistant Professor of History and Government
Office 363 East Building	Res. 71 Gainsborough St., Boston
EVERETT CARTER MARSTON, A.B., M.A.	Assistant Professor of English
Office 453 East Building	Res. 40 Hereward Rd., Newton Centre
ANTONIO LIBERTO MEZZACAPPA, A.B., M.A., Ph.D.	Assistant Professor of Modern Languages
Office 463 East Building	Res. Iverness Rd., Arlington
RUDOLPH MAGNUS MORRIS, S.B., Ed.M.	Assistant Professor of Education
Office 153 Richards Hall	Res. 99 Knollwood Rd., Squantum
WILLIAM JOHN PINARD, A.B., M.A., Ed.M., Ph.D.	Assistant Professor of Sociology
Office 463 East Building	Res. 14 Parkway Rd., Brookline
CHARLES M. RAMSEY, A.B., M.A.	Assistant Professor of Economics
Office 350 East Building	Res. 458 Huntington Ave., Boston
PAUL EVERETT REYNOLDS, A.B., Ph.D.	Assistant Professor of English
Office 453 East Building	Res. 17 Forest St., Cambridge
GERALD RUSSELL TATTON, S.B., M.B.A.	Assistant Professor of Marketing
Office 355 Richards Hall	Res. 52 Oakland St., Medford
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Office 453 East Building	Res. Maynard Rd., Sudbury
EMANUEL FLUMERE, A.B.	Instructor in Physical Education
Office 355 Richards Hall	Res. 29 Loker St., Natick
HERBERT WENDELL GALLAGHER, S.B.	Instructor in Business Administration and Head Coach of Hockey and Baseball
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## Convocation Lecturers

BANCROFT BEATLEY  
PRESIDENT, SIMMONS COLLEGE  
*"The College and Vocational Education"*

HORACE T. CAHILL  
LIEUTENANT GOVERNOR OF THE COMMONWEALTH  
*"The Challenge to American Citizenship"*

ROBERT P. TRISTRAM COFFIN  
AUTHOR, LECTURER  
*"What Poems Are"*

J. ANTON DE HAAS  
PROFESSOR OF INTERNATIONAL RELATIONSHIPS, HARVARD UNIVERSITY  
*"International Affairs"*

GEORGE H. EDGELL  
DIRECTOR, BOSTON MUSEUM OF FINE ARTS  
*"Recent Museum Accessions"*

H. V. KALTENBORN  
NEWS COMMENTATOR  
*"Kaltenborn Edits the News"*

HARRY A. OVERSTREET  
PROFESSOR EMERITUS, COLLEGE OF THE CITY OF NEW YORK  
*"Ten Ways to Reach Wrong Conclusions"*

G. BROMLEY OXNAM  
BISHOP, METHODIST CHURCH  
*"A Date with the World"*

CLAYTON F. MUGRIDGE  
MANAGER, INDUSTRIAL RELATIONS, EAGLE PENCIL COMPANY  
*"Leadership's Challenge to Youth"*

JAMES H. POWERS  
OF THE BOSTON GLOBE EDITORIAL STAFF  
*"The Engineer in the New World"*

CLARENCE R. SKINNER  
DEAN, TUFTS SCHOOL OF RELIGION  
*"The Old Problem of Evil"*

KENNETH C. M. SILLS  
PRESIDENT, BOWDOIN COLLEGE  
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EDITOR, THE ATLANTIC MONTHLY  
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## *Chapel Preachers*

DR. CHARLES N. ARBUCKLE  
MINISTER, FIRST BAPTIST CHURCH, NEWTON

DR. RICHARD H. BENNETT  
MINISTER, PAYSON PARK CHURCH, BELMONT

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PROFESSOR OF CHURCH HISTORY, BOSTON UNIVERSITY

DR. HOWARD J. CHIDLEY  
MINISTER, FIRST CONGREGATIONAL CHURCH, WINCHESTER

REVEREND ROBERT WOOD COE  
MINISTER, LEYDEN CONGREGATIONAL CHURCH, BROOKLINE

DR. FRANK E. DUDDY  
MINISTER, NORTH CONGREGATIONAL CHURCH, CAMBRIDGE

DR. NEWTON C. FETTER  
MINISTER TO BAPTIST STUDENTS IN GREATER BOSTON

DR. C. LESLIE GLENN  
MINISTER, CHRIST CHURCH, CAMBRIDGE

REVEREND WILLIAM H. GYSAN  
MINISTER TO UNITARIAN STUDENTS IN GREATER BOSTON

DR. CHARLES W. HAVICE  
EXECUTIVE SECRETARY, NORTHEASTERN STUDENT UNION

DR. FRANK JENNINGS  
EXECUTIVE SECRETARY, MASSACHUSETTS COUNCIL OF CHURCHES, BOSTON

REVEREND CARL H. KOPF  
MINISTER, MOUNT VERNON CHURCH, BOSTON

DR. ASHLEY D. LEAVITT  
MINISTER, HARVARD CONGREGATIONAL CHURCH, BROOKLINE

DR. ELMER A. LESLIE  
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DR. PALFREY PERKINS  
MINISTER, KING'S CHAPEL, BOSTON

FATHER THOMAS R. REYNOLDS  
PRIEST, ST. MATTHEW'S CHURCH, DORCHESTER

DR. HENRY K. SHERRILL  
BISHOP, EPISCOPAL CHURCH

DR. DAVID D. VAUGHAN  
PROFESSOR OF SOCIAL ETHICS, BOSTON UNIVERSITY

# NORTHEASTERN UNIVERSITY

## General Statement

NORTHEASTERN UNIVERSITY is incorporated as a philanthropic institution under the General Laws of Massachusetts. The State Legislature, by special enactment, has given the University general degree granting powers.

The Corporation of Northeastern University consists of men who occupy responsible positions in business and the professions. This Corporation elects from its membership a Board of Trustees in whom the control of the institution is vested. The Board of Trustees has four standing committees: (a) an Executive Committee which serves as an Ad Interim Committee between the regular meetings of the Board of Trustees and has general supervision of the financial and educational policies of the University; (b) a Committee on Housing which has general supervision over the buildings and equipment of the University; (c) a Committee on Funds and Investments which has the responsibility of administering the funds of the University; (d) a Development Committee which is concerned with furthering the development plans of the University.

Founded in 1898, Northeastern University, from the outset, had as its dominant purpose the discovery of human and social needs and the meeting of these needs in distinctive and highly serviceable ways. While subscribing to the most progressive educational thought and practice, the University has not duplicated the programs of other institutions but has sought "to bring education more directly into the service of human needs."

With respect to program, Northeastern has limited itself:

- To offering, in its several schools, basic curricula from which non-essentials have been eliminated,
- To effective teaching,
- To advising and guiding students,
- To giving students the chance to build well-rounded personalities through a balanced program of extra-curricular activities.

The Northeastern Plan of Education is especially designed for the student who must earn while he learns. In the main, it consists of two definite types of education:

- Co-operative Education by Day,
- Adult Education by Night.

The plan has been developed in such a way that experience in jobs with pay is utilized to help boys of limited financial resources secure an education and at the same time gain the maximum

educational benefit from their practical experience. So far as the New England States are concerned, Northeastern University is the only institution whose day colleges, other than the School of Law, are conducted under the Co-operative Plan.

The several schools and programs of the University are operated either under the name "Northeastern University" or by its affiliated schools—the Lincoln Schools and The Huntington Day School for Boys. The following is a brief outline of the principal types of educational opportunities offered.

1. In the field of Co-operative Education there are three day colleges — the College of Liberal Arts, the College of Engineering, and the College of Business Administration. All of these colleges offer five-year curricula. The College of Liberal Arts offers majors in the usual fields of the arts and the sciences leading to the degrees of Bachelor of Arts and Bachelor of Science. The College of Engineering, one of the largest engineering colleges in the United States, has curricula in Civil, Mechanical (with Air-Conditioning and Aeronautical options), Electrical, Chemical, and Industrial Engineering. The College of Business Administration has curricula in Accounting, Banking and Finance, Marketing and Advertising, Journalism, Public Administration, and Industrial Administration. The College of Engineering and the College of Business Administration confer the degree of Bachelor of Science with specification indicating the field of specialization. The Co-operative Plan under which all of these day colleges operate enables the student to alternate regular periods of classroom instruction with supervised employment in an industrial or commercial position, thus combining theory and practice in an exceedingly effective manner. Apart from the educational advantages of the Co-operative Plan is the opportunity for self-support while the student is pursuing his studies at Northeastern University. During the co-operative periods, students not only gain experience but are also paid for their services. Approximately three hundred business and industrial concerns co-operate with Northeastern University in making this program effective.
2. The School of Law conducts both a day and an evening undergraduate program which prepares for admission to the bar and for the practice of the law and leads to the degree of Bachelor of Laws. It also conducts a graduate program in the evening leading to the degree of Master of Laws.
3. The Adult Education Program has been developed in the evening work of the School of Law as indicated above, in



the School of Business, and in the evening courses of the College of Liberal Arts. The School of Business has curricula in Management — with Industrial and Merchandising majors, Accounting, Law and Business Management, and Engineering and Management. The School awards the Bachelor of Business Administration degree with specification and the Bachelor of Commercial Science degree in Law and Business Management. The College of Liberal Arts offers an evening program the equivalent in hours to one-half of the requirements for the A.B. or S.B. degree, providing a general education and preparation for admission to the School of Law. The title of Associate in Arts is conferred upon those who complete this program.

4. In order that larger groups of men and women might be served through its evening schools, Northeastern University operates divisions of the School of Law and the School of Business in co-operation with the Young Men's Christian Association in Worcester and Springfield and of the School of Business in co-operation with the Providence Young Men's Christian Association. With the establishment of the divisions thorough-going methods of supervision were instituted and have been consistently followed and improved, with the result that the divisional work is conducted upon a highly efficient basis.
5. The Adult Education Program has also been developed through the Lincoln Schools, which are affiliated with and conducted by Northeastern University. The classes in these schools are held at convenient evening hours. The Lincoln Technical Institute offers curricula upon a college level in various phases of engineering leading to the title of Associate in Engineering; whereas the Lincoln Preparatory School, accredited by the New England College Entrance Certificate Board, prepares students for admission to college and offers other standard high school programs.
6. The Huntington Day School for Boys, also affiliated with and conducted by Northeastern University, is the outgrowth of a demand in the city of Boston for an urban preparatory school with high educational standards which would furnish thorough preparation for admission to the leading colleges and universities. While easily accessible to the various sections of Boston and to the suburbs, it has the facilities of a country day school and offers a country day school program. This School is one of the leading preparatory schools of the country.

# *Northeastern University and Affiliated Schools*

## *Statistical Summary*

1939-1940

	Administrative Officers and Faculty	Students
General Administration	9	
Northeastern University		
College of Liberal Arts		525
College of Engineering	108	1408
College of Business Administration		538
School of Law	46*	1204*
School of Business	102*	1709*
Evening Courses — College of Liberal Arts	11	117
Affiliated Schools		
Lincoln Technical Institute	37	585
Lincoln Preparatory School	20	422
Huntington Day School for Boys		
Regular Term	16	176
Summer Term	8	143
	<hr/>	<hr/>
Total	357	6827
Less Duplicates	45	476
	<hr/>	<hr/>
	312	6351

\*These figures include the administrative officers, faculties, and students of the Divisions of the University in Worcester, Springfield, and Providence.

## The Co-operative Plan

### *How It Works*

THE co-operative plan works in the following manner. Upperclassmen are divided into two nearly equal groups, one of which is called Division A and the other Division B. Each man is assigned a job with some business or industrial concern. So far as possible each man in one Division is paired with a man in the other Division, so that the two, by taking turns, may occupy one job throughout the entire year. In September the Division A student returns to the University for ten weeks of classroom work. At the end of that time he goes out to work ten weeks with a co-operating firm. His place at the University is then taken by his *alternate*, the corresponding Division B student. When ten weeks more have passed, the Division A man returns to college, and the Division B man returns to the co-operative job. The alternation of work and classroom study continues throughout the year so that an upperclassman has annually twenty weeks at college, twenty-six weeks at co-operative work, and six weeks of vacation.

### *Faculty Co-ordinators*

Students are assigned to a co-ordinator, who interviews them periodically during their freshman year for the purpose of determining their background, abilities, temperaments, and aptitudes. During these interviews the co-ordinator discusses various fields of activity and answers such questions as the students may have in regard to the many phases of business and industry. Each student is studied in the light of his physical condition, scholastic ability, and other factors affecting his probable success in vocational life. These interviews culminate in an agreement between the student and his co-ordinator regarding the field of co-operative work in which the student is to be placed. During his upperclass years the student continues to have frequent conferences with his co-ordinator regarding vocational adjustments and personal problems. In this way the progress of every student is observed and co-ordinated with his college work to the end that he may obtain maximum values from his training at Northeastern.

### *Placement*

The co-ordinator visits co-operating firms and arranges with them for the employment of the students under his charge. The range of opportunities available to Northeastern students is wide,



including practically all phases of industrial life. As a general rule, sophomores are placed upon routine and laborious jobs through which they may prove their fitness for more responsible work. The jobs upon which Northeastern students are employed are in no sense protected opportunities. They are regular jobs under actual business conditions and are held in competition with other sources of supply. The only special privilege accorded Northeastern students is that of attending college on the co-operative plan. The University expects every student to stand on his own feet while he is on co-operative work, and advancement to the more responsible jobs is based entirely upon merit.

### *Supervision and Guidance*

While the University does not adopt a paternal attitude toward co-operative work, it nevertheless assumes certain responsibilities toward students and co-operating firms. Co-ordinators visit each job in order that the employer may report upon the student's achievement and that necessary adjustments may be made. Co-ordinators supervise the assignment of students to various jobs and in conjunction with employers arrange for promotions and training schedules. Problems that arise on co-operative work are adjusted by common agreement of co-ordinator, student, and employer. In the event of special difficulties or dissatisfaction, the case may be adjusted by the Committee on Co-operative work, which comprises several members of the faculty.

Through a series of co-operative work reports prepared during their working periods, students are led to analyze their jobs and to develop a thoughtful and investigative attitude toward their working environment. A most important phase of co-operative work is the opportunity afforded for guidance by the frank discussion of actual problems encountered on the job. The intimate contact between co-ordinator and student is of great worth in helping the student to get the most value from each co-operative work assignment. While the University endeavors to provide every possible opportunity for its students, it expects them at the same time to take the initiative and to assume the responsibility involved in their individual development. To every student are available the counsel and guidance of the faculty, and every resource at its disposal. But the faculty does not coerce students who are uninterested or unwilling to think for themselves.

The co-operative plan is thus designed specifically to provide actual working conditions which afford the student practical experience, give meaning to his program of study, and train him in reliability, efficiency, and team work.



### *Correlation of Theory and Practice*

Co-operating companies employ the students in the various departments of their establishments. The training is thorough. To derive the greatest value from his co-operative work the student is advised to continue in the employ of his co-operating firm for at least one year after graduation, since certain types of work which would afford him valuable experience cannot be made available to him while he is alternating between work and study. Statistics compiled over a period of many years show that on the average about fifty per cent of each graduating class remain with co-operating employers after graduation.

### *Co-operative Work Reports*

The values to be derived from practical experience are further enhanced by required report writing. These co-operative work reports are written during the working periods by all co-operative students. A complete job analysis is required as the first report written on any new co-operative work assignment. Subjects of other reports are selected by the student after conference with his Co-ordinator of Co-operative Work, by whom they must be approved. The reports are designed to encourage observation and investigation on the part of the students and to help them to appreciate more fully the extent and value of their experience. These reports are carefully read by the Co-ordinator and are discussed with the student during the following college period. Exceptionally valuable results are obtained from these reports. The value derived must necessarily be directly proportional to the conscientious and intelligent concentration of effort by the student upon this phase of the work.

### *Co-operative Work Records*

Complete and detailed records are kept of the co-operative work of each student. They are based upon reports made by the employer at the end of each working period; upon occasional personal interviews between the employer and the Co-ordinator; and upon various evidences of the student's attitude toward all the phases of his co-operative work. It is not possible for the student to secure a degree unless this part of the curriculum is completed satisfactorily. These records of practical experience serve as a valuable future reference for the Alumni Placement Division of the Department.

### *Positions Available*

Because of uncertainties of business conditions, as well as other reasons beyond its control, the University cannot and does not guarantee to place students. Although the University in no way discriminates among students of various races and religions, considerable difficulty has been experienced in placing at co-operative work the members of certain racial groups and students who are physically handicapped. However, past experience has demonstrated that students who are willing and capable of adapting themselves to existing conditions are almost never without employment except in periods of severe industrial depression.

### *Earnings*

The rates of pay for students tend to be low because students are given the privilege of attending college on the Co-operative Plan and because effort is made to provide the student with the opportunity of being transferred, at reasonable intervals, from one department to another of the co-operating company. It should be understood that the primary purpose of the Co-operative Plan is training.

The minimum rate of pay will be governed to a very large extent by prevailing wages and hours laws. To assist the student in budgeting his expenses, however, he can plan in normal times on a weekly rate of \$14.

### *Location of Work*

It is the policy of the University to assign students to co-operative work within commuting distance of their homes. This is not always possible, however, and at times it may be necessary for students to live away from home in order to obtain satisfactory and desirable co-operative work assignments.

### *Types of Co-operative Work*

Insofar as possible students are placed at co-operative work in that general field for which they express preference, provided that aptitude, physical ability, temperament, and other personal qualities appear to fit them for this field. Usually students are placed first in the lower ranks of an organization where they may learn the fundamental requirements of the business.

For example, a student interested in manufacturing might be started as an operative on some machine in the plant. As his progress and other conditions warranted he would be transferred to other types of work such as shipping, inspecting, cost finding, adjusting complaints, or bookkeeping, and so on, so that in the course of his four years co-operative training he would have the opportunity to acquire a substantial background in at least some of the functions of factory administration. This progressive type of training is more readily obtained in the employ of one company. A change of company each year provides more a change of environment than a progression of experiences.

Engineering firms, manufacturing companies, public utilities, and many other types of enterprises are employing Northeastern students. In some cases definite training schedules have been established so as to permit the student one full year in each of several important departments.

### *Typical Co-operative Training Schedules*

These schedules are arranged with the basic idea of giving the student a comprehensive training through the several different departments, but must of necessity be varied in accordance with the needs of those departments.

#### BOSTON & MAINE RAILROAD CO.

- ONE YEAR — Erecting Shop
- ONE YEAR — Machine Shop
- ONE YEAR — General work in Machine Shop and Erecting Shop
- ONE YEAR — Mechanical Engineer's Dept.

#### BOSTON EDISON COMPANY

The schedule of the Boston Edison Company is divided into the following general classifications. Very few co-operating students obtain experience in all branches, but students progress from year to year in the respective branches as conditions require.

##### *Standardizing*

- (a) Testing and standardizing of electrical instruments
- (b) Miscellaneous standardization
- (c) Repairs on electrical instruments
- (d) Laboratory high voltage tests

##### *Steam Practice*

- (a) Turbine, engine and boiler tests
- (b) Instrument tests and repairs
- (c) Miscellaneous tests

*Electrical Testing*

- (a) Testing and repairing of electrical instruments in power stations and sub-stations
- (b) Cable tests
- (c) High voltage tests on apparatus and in the field
- (d) Checking up construction work
- (e) Miscellaneous electrical tests

*Chemical Engineering*

- (a) Fuel analysis
- (b) Miscellaneous tests and analysis of oils, water paints, and other materials

*Photography**Office Work*

## HUNT-SPILLER MANUFACTURING CORPORATION

ONE YEAR General laboratory and plant work, including preparation of samples

## Pyrometry

Use and care of metallurgical apparatus

ONE YEAR Complete analysis of coal, coke, limestone, sand, iron, soil, etc.

ONE YEAR Keeping of general metallurgical records, filing, and making of reports

ONE YEAR Analysis for combined, graphitic, and total carbon with a complete knowledge of a carbon combustion apparatus

## PEPPERELL MANUFACTURING COMPANY

ONE YEAR Stock Records

ONE YEAR Production Analysis

ONE YEAR Inventory Control



## General Information

### *College Expenses*

#### *Tuition*

THE tuition for all curricula in the Day Colleges is \$250 per year, or \$125 per term. Certain fees and deposits are also required as specified in the following paragraphs. A complete statement of tuition and fee payments is given on page 28.

Students who carry academic loads of greater or less than normal amount may pay their tuition on a semester hour basis.

#### *University Fee*

All students are charged a University Fee of twenty-four dollars (\$24) each year. This fee is payable in two installments: fourteen dollars (\$14) with the first payment of tuition and ten dollars (\$10) with the second payment of tuition. These charges are included in the schedule of payments on page 28.

The University Fee covers library, laboratory, materials charges, and similar items for which separate fees are frequently charged by other colleges and universities. It is payable by all students regardless of the curriculum in which they are enrolled.

#### *Student Activities Fee*

Each student in the Day Colleges is charged a student activities fee of sixteen dollars (\$16). This fee is payable at the time of registration and is included in the schedule of payments on the following page. This fee supports in part certain student activities, and includes membership in the *Northeastern University Athletic Association*, *The Northeastern Student Union* and subscription to *The Northeastern News*, the college paper.

The services of a physician are also available for all students under this fee. Minor ailments are treated by the college health officers without additional charge. If the student shows signs of more serious illness, he is immediately advised to consult a specialist or return to his home, where he can get further treatment.

#### *Deferred Payment Fee*

There will be a \$2.00 deferred payment fee added to all bills which are not paid by the Saturday following the date on which payments fall due. When further extensions of time are given on payments which have been previously deferred, an additional \$2.00 fee will be charged for each extension.

Failure to make the required payments on time, or to arrange for such payments, is considered sufficient cause to bar the student from classes or suspend him from co-operative work until the matter has been adjusted with the Registrar.

### *Schedule of Payments for Freshmen*

<i>Date Due</i>		<i>Amount</i>
September 10, 1942	Tuition	\$125.00
	Fees	30.00
		<hr/> \$155.00
February 8, 1943	Tuition	\$125.00
	Fees	10.00
		<hr/> \$135.00

### *Schedule of Payments for Upperclassmen*

<i>Division A</i>		
September 14, 1942	Tuition	\$125.00
	Fees	30.00
		<hr/> \$155.00
February 1, 1943	Tuition	\$125.00
	Fees	10.00
		<hr/> \$135.00
<i>Division B</i>		
November 23, 1942	Tuition	\$125.00
	Fees	30.00
		<hr/> \$155.00
April 12, 1943	Tuition	\$125.00
	Fees	10.00
		<hr/> \$135.00

### *Late Registration Fee*

A fee of \$5.00 will be charged for failure to register in accordance with prescribed regulations on the dates specified in the college calendar.

### *Graduation Fee*

A fee of ten dollars (\$10) covering graduation is required by the University of all candidates for a degree. This fee must be paid before the end of the seventh week of the second term in the senior year.

### *Payments*

All payments should be made at the treasurer's office which is located on the first floor of Richards Hall. Checks should be made payable to Northeastern University.

### *Refunds*

The University assumes the obligation of carrying the student throughout the year. Instruction and accommodations are provided on a yearly basis; therefore, no refunds are granted except when students are compelled to withdraw on account of personal illness.

### *Expenses*

The following tables, compiled from expense returns submitted by the student body, give an idea of freshman expenditures under ordinary conditions.

#### *Estimated College Expenses for a Freshman*

Application Fee.....	\$ 5.00
Tuition.....	250.00
University Fee.....	24.00
Student Activities Fee.....	16.00
Books and Supplies.....	35.00
	<hr/>
	\$330.00

#### *Estimated Living Expenses Per Week for a Freshman Residing Away from Home*

Room Rent.....	\$ 4.00
Board.....	7.00
Laundry.....	1.00
Incidentals.....	2.00
	<hr/>
	\$14.00

The figures given above are approximate and may not exactly apply to any one student; however, they will be found to represent fairly well the expense of a freshman who lives comfortably but without extravagance.

### *Textbooks and Supplies*

The Northeastern University Bookstore, located in the Basement of Richards Hall, is a department of the University and is operated for the convenience of the student body. All books and supplies which are required by the students for their work in the University may be purchased at the Bookstore.

A Northeastern Bookstore Discount Card is issued to every Day College student at the time of registration and entitles him to a ten per cent discount on all Day College textbooks which he purchases for his own use while in school.

The ten per cent discount does not apply on equipment, supplies or novelties. It is the policy of the bookstore, however, to stock these materials and to sell them at the lowest possible prices.

### *Part-Time Work*

Students who find it necessary to accept part-time jobs while attending college may obtain such work through the Director of Co-operative Work.

No student is justified in assuming that the University will take care of his expenses or guarantee to supply him with work sufficient to meet all his needs.

A student should have available a reserve fund adequate to provide for immediate needs and unexpected contingencies. This should ordinarily amount to at least the first year's tuition plus the student activity and other fees, room rent, and board for several weeks, or a total of about \$500.



## *Grades and Examinations*

### *Examinations*

Examinations covering the work of the term are usually held at the close of each term. Exceptions may be made in certain courses where, in the opinion of the instructor, examinations are not necessary.

Condition examinations are given in most subjects once each year without charge. Condition examinations are not given for laboratory courses.

Special examinations may be arranged for only in the Registrar's office, and for all such examinations the University requires the payment of a special fee of five dollars (\$5.00).

### *Grades*

A student's grade is officially recorded by letters, as follows:

- A superior attainment
- B above average attainment
- C average attainment
- D lowest passing grade, poor attainment (the faculty will accept only a limited amount of grade D work toward the Bachelor's degree)
- F failure, removable by condition examination
- FF complete failure, course must be repeated in class
- I incomplete, used for intermediate grades only to signify that the student has not had time to make up work lost through excusable enforced absence from class
- L used in all cases of the removal of a failure by condition examination or by attendance at summer term.

A student who does not remove a condition before that course is again scheduled, a year later, must repeat the course. A condition in more than one subject may involve the loss of assignment to co-operative work.

The responsibility for the removal of a condition rests with the student who is required to ascertain when and how the condition can be removed.

### *Dean's List*

A Dean's List, issued at the end of each term, contains the names of upperclass students who have an honor grade average in all subjects during the preceding period. Freshmen who achieve high scholastic standing are included on a Freshman Honor List,

which is published at the end of each grading period. No student under disciplinary restrictions is eligible for either of the honor lists.

### *Reports on Scholastic Standing*

Freshman reports are issued at the end of each grading period; upperclass reports, at the end of each term. In addition, a special report on review subjects pursued during the summer term will be issued immediately at its close. Questions relative to grades are to be discussed with the student's faculty adviser.

Students are constantly encouraged to maintain an acceptable quality of college work. Parents and students are always welcomed by the college officers and faculty advisers for conference upon such matters.

Parents or guardians will be notified whenever students are advised or required to withdraw from the University.

## *General Conduct*

### *Conduct*

It is assumed that students come to the University for a serious purpose and that they will cheerfully conform to such regulations as may from time to time be made. In case of injury to any building or to any of the furniture, apparatus, or other property of the University, the damage will be charged to the student or students known to be immediately concerned; but if the persons who caused the damage are unknown, the cost for repairs may be assessed equally upon all the students of the University.

Students are expected to observe the accepted rules of decorum, to obey the regulations of the University, and to pay due respect to its officers. Conduct inconsistent with the general good order of the University or persistent neglect of work may be followed by dismissal; if the offense be a less serious one, the student may be placed upon probation. The student so placed upon probation may be dismissed if guilty of any further offense.

It is desired to administer the discipline of the University so as to maintain a high standard of integrity and a scrupulous regard for truth. The attempt of any student to present as his own any work which he has not performed, or to pass any examination by improper means, is regarded as a most serious offense and renders the offender liable to immediate expulsion. The aiding and abetting of a student in any dishonesty is also held to be a grave breach of discipline.

### *Scholastic Year for Seniors*

Seniors of either division who are candidates for a degree in the current year must have completed all academic work, class assignments, theses, regular and special examinations, before twelve o'clock noon of the Saturday next following the close of recitations for seniors.

### *Attendance*

Students are expected to attend all exercises in the subjects they are studying unless excused in advance. Exercises are held and students are expected to devote themselves to the work of the University between 9:00 A.M. and 5:00 P.M., except for a lunch period, on every week day except Saturday. Saturday classes are held only between 9:00 A.M. and 1:00 P.M.

No cuts are allowed. A careful record of each student's attendance upon class exercises is kept. Absence from regularly scheduled exercises in any subject will seriously affect the standing of the student. It may cause the removal of the subject or subjects from his schedule. If he presents a reasonable excuse for the absence, however, he may be allowed to make up the time lost and be given credit for the work; but he must complete the work at such time and in such manner as his instructor in the course may designate.

Laboratory work can be made up only when it is possible to do so during hours of regularly scheduled instruction.

Absences from exercises immediately preceding or following a recess are especially serious and entail severe penalties.

Attendance at all mass meetings of the student body is compulsory. Exceptions to this rule are made only when the student has received permission from the Director of Student Activities previous to the meeting from which he desires to be absent.

## *Student Housing*

### *Housing Regulations*

The University endeavors to exercise due consideration and care for the student's welfare while he is in residence. This necessitates the adoption of the rules and regulations presented herewith.

1. Assignments will be made when the student registers.
2. Students may inspect rooms before accepting an assignment; after reaching a decision students must notify the office of the Registrar, 254R.

3. Students who accept room assignments must retain them for the period of their residence, unless given permission by the Registrar to change.

4. Students are not permitted to live in unsupervised quarters. Under no conditions are groups of students permitted to lease apartments.

5. Students are not permitted to engage rooms without the prior approval of the University. Those violating this rule will be required to give up such rooms immediately and will be assigned by the University to approved quarters.

6. Violation of any of the above rules is considered a breach of discipline and will be dealt with accordingly.

### *Dormitories*

At present the University does not maintain dormitories. Provision, however, is made for students to secure rooms in the vicinity. Many freshmen prefer to take room and board at the fraternity houses, which are all supervised by the University through faculty advisers. For information relative to such housing write the Director of Admissions.

Rooms in the dormitory of the Huntington Avenue Branch of the Boston Y.M.C.A. may be secured only through the Housing Department of the Y.M.C.A. The applicant must present himself in person to a representative of the Department before assignment will be made.

Applicants desiring to room in the Association dormitory are advised to write the Housing Department of the Huntington Avenue Branch, 316 Huntington Avenue, Boston, Massachusetts.



## *Freshman Counseling*

### *Freshman Orientation Period*

In order that freshmen may be ready to pursue their academic work with greater composure and be somewhat acclimated before the beginning of scholastic work, three or four days prior to the first term are devoted to a freshman orientation period. During this time freshmen are advised as to choice of program, and assisted in every way possible in order that they may be prepared to begin serious study and work on the first day of the college term. All freshmen are required to attend all exercises at the University scheduled during the orientation period.

An optional feature of the orientation program is the freshman camp conducted under the auspices of the Student Union. The camp is planned particularly for out-of-town students, although commuters are welcomed. It aims at providing a stimulating and wholesome environment under vacation conditions in which the new men may become acquainted with one another and with members of the faculty. The camp site on Lake Massapoag, in the northern part of Massachusetts, is admirably equipped for this purpose, having ample facilities for baseball, basketball, tennis, boating and swimming. The cost of the two days at camp is nominal, and most freshmen avail themselves of this opportunity for recreation prior to the beginning of the college year.

### *Physical Examination*

All freshmen receive a thorough physical examination at the University during the orientation period. All students are expected to report promptly at the appointed time for examination. Those who fail to appear at the appointed time will be charged a special examination fee of two dollars (\$2.00).

### *Freshman Counselors*

At the time of his matriculation each freshman is assigned to a personal counselor, a member of the faculty, who serves as an interested and friendly counselor during the perplexing period of transition from school to college. A personal record card is prepared for each student, containing certain pertinent data from his preparatory school record, the report of his physical examination at Northeastern, his scores on psychological tests, the results of placement examinations, and any special notes which may be of significance in counseling work. The aim of the freshman counseling system is primarily to assist students in making an

effective start upon their programs and secondarily to acquire for the later use of guidance officers a fund of significant information relative to every freshman. Counseling is under the direction of the Dean of Students, assisted by a clinical psychologist, who handles the diagnosis and remedial treatment of difficult problem cases.

### *Individual Attention to Freshmen*

Not only is attention given to the scholastic problems of the student, but also to personal problems in which advice is needed and desired. The aim is to guide the student to the fullest possible personal development.

The college record of each student is carefully analyzed in the light of what could reasonably be expected of him, in view of his previous school record, his score on psychological tests, and all other factors in his situation. If he is not doing his best work, an investigation is made to determine and eliminate the causes. If he is doing as well as could be expected or better, he is encouraged to continue his efforts. In other words, each student is held to the most effective work possible, through advice, encouragement, and assistance.

## *Scholarships, Prizes and Awards*

### *Trustee Scholarships*

Established in 1928 by the Board of Trustees of Northeastern University. Each year the University grants in the three Day Colleges twenty-five full tuition scholarships to entering freshmen who have demonstrated throughout their preparatory or high school course superior scholastic attainment. For additional information relative to these scholarships communicate with the Director of Admissions. Applications for Trustees' Scholarships must be filed on or before May 15.

### *Charles Hayden Memorial Scholarships at Northeastern University*

Established in 1939 through the generosity of the Charles Hayden Foundation and subject to annual renewal. The Foundation, created by the will of the late Charles Hayden, an alumnus of the Boston English High School, offers annually a sum of money to be distributed as memorial scholarships at Northeastern University. The scholarships are awarded to worthy entering students whose parents are unable to finance the entire cost of their education. To be eligible for consideration a student must have graduated from the English High School or from one of the following high schools in Boston and its metropolitan area: Arlington, Belmont, Boston (Brighton, Charlestown, Commerce, Dorchester, East Boston, English, Hyde Park, Jamaica Plain, Mechanic Arts, Public Latin, Roslindale, Roxbury Memorial, South Boston), Braintree, Brookline, Cambridge (High and Latin, Rindge Technical), Canton, Chelsea, Dedham, Everett, Lexington, Malden, Medford, Melrose, Milton, Needham, Newton, North Quincy, Quincy, Revere, Somerville, Stoneham, Wakefield, Waltham, Watertown, Wellesley, Weston, Weymouth, Winchester, Winthrop. While the scholarships are designed primarily to assist students through their freshman year in college, the Foundation has set up a supplementary loan fund to make available limited assistance to meet exigencies which may arise in the upper class years. Each recipient of a Charles Hayden Memorial Scholarship is presented a properly endorsed certificate and is eligible for membership in the Charles Hayden Scholars Club of the University. Full particulars concerning these awards may be obtained from the Director of Admissions of Northeastern University.

### *Dean's List Scholarships*

Established in 1929. Annually at the Dean's List Dinner three scholarships of one hundred dollars each, known as the Dean's

List Scholarships, are presented to the students with the outstanding records in the sophomore, middler, and junior classes. These scholarships are applicable to the recipients' tuition the first term of the following year.

### *Dean's List Senior Letter*

Established in 1929. At the time of the award of the Dean's List Scholarships a Dean's List Senior letter is presented to the senior student who leads the seniors in the day colleges in scholastic achievement. The letter is a congratulatory one from the President of the University and is a coveted prize.

### *Sears B. Condit Honor Awards*

Established in 1940 through the generosity of Sears B. Condit. In the fall of the year at a University convocation Sears B. Condit Honor Awards, not less than ten in number, are awarded to outstanding students in the upper three classes of the College of Liberal Arts, the College of Business Administration, and the College of Engineering. Students who have received the Dean's List Scholarships are not eligible for one of these Honor Awards. Each award carries a stipend of not less than fifty dollars as well as a certificate of achievement.

### *Boston Society of Civil Engineers Scholarship in Memory of Desmond FitzGerald*

Established in 1931 by the Boston Society of Civil Engineers in memory of Desmond FitzGerald, a former president of the Society and an eminent hydraulic engineer with a distinguished record of service. The scholarship is subject to annual renewal. It has been awarded annually since 1931 to an outstanding Northeastern University senior or junior student in the Department of Civil Engineering of the College of Engineering. The presentation is made by the President of the Boston Society of Civil Engineers at a College of Engineering convocation in the spring of the year.

### *The Senate Award*

Established in 1932. The Senate, the honor society of the College of Engineering, offers annually a scholarship of one hundred dollars to the freshman in the college who has, during the previous year, made the highest scholastic record.



### *The Sigma Society Award*

Established in 1930. The Sigma Society, the honor society of the College of Business Administration, offers annually a scholarship of one hundred dollars to the freshman in the college who has, during the previous year, made the highest scholastic record.

### *The Academy Award*

Established in 1938. The Academy, the honor society of the College of Liberal Arts, offers annually a scholarship of one hundred dollars to the freshman in the college who has, during the previous year, made the highest scholastic record.

### *Henry B. Alvord Memorial Scholarship in Civil Engineering*

Established in 1940 in memory of the late Henry B. Alvord, Professor of Civil Engineering and Chairman of the Department for eighteen years. The award is made annually to a student graduating from an accredited secondary school who has demonstrated superior academic ability and gives promise of succeeding in civil engineering. The grant of two hundred and fifty dollars is made only to an entering freshman who is qualified for and plans to study civil engineering.

### *William J. Alcott Memorial Award*

Established in 1934 by members of the faculty and other friends to perpetuate the memory of William Jefferson Alcott, Jr., a brilliant member of the Department of Mathematics in Northeastern University from 1924 until his death in 1933. The Award is offered annually in the form of a prize purchased with the income to the fund for outstanding scholastic achievement during the preceding year, either in a particular field of interest or for a superior academic record.

### *Public Speaking Contest*

Established in 1922. Each spring the University conducts a Public Speaking Contest for which all students in the day colleges are eligible. Prizes of forty, thirty, twenty, and ten dollars respectively are awarded to the four winning speakers in a contest before the upperclass student body assembled in a general mass meeting. Speeches are original in nature and about ten minutes in length. The judges base their decision on appropriateness of subject, content, and delivery. Preliminary contests are held during the winter in each division.

## *Buildings and Facilities*

### *Boston—A Great Educational Center*

THE fact that Northeastern University is in Boston broadens the educational and cultural opportunities of its students.

Few other cities in the country are so rich in the finest elements of American life. Many of its historic buildings, such as the Old State House, Faneuil Hall, and the Old North Church, have become museums for the preservation of old documents, paintings, and other collections representative of early Colonial life. The Boston Public Library and the Museum of Fine Arts, both within a few blocks of the University Buildings, are widely noted for their treasures of literature and art. Even nearer to the University is Symphony Hall, home of the world-famous Boston Symphony Orchestra. And the many churches within Greater Boston not only afford the opportunity of hearing distinguished preachers but through their student clubs and young people's societies make possible for students a fine type of social and intellectual life.

### *University Buildings*

#### *Location*

Northeastern University, except for the Law School, is housed in three buildings located on Huntington Avenue, Boston, just beyond Massachusetts Avenue and opposite the historic Boston Opera House. The main administrative offices of the University are located in Richards Hall, a four-story brick structure added to the physical plant of Northeastern in 1938.

The chief railroad centers of Boston are the North and South Stations. To reach the University from the North Station, board a car going to Park Street, at which junction transfer to any Huntington Avenue car. To reach the University from the South Station, board a Cambridge subway train for Park Street Under. There go up one flight of stairs and board any Huntington Avenue car.

#### *East Building*

The East Building serves as headquarters for the Colleges of Liberal Arts and Business Administration. In addition, it houses the University Library, the Business Administration Laboratory, and several department offices. Jacob P. Bates Hall is also in this building. The latter is used for University band and orchestra rehearsals, glee club rehearsals, and entertainments, as well as dramatic club work.

### *South Building*

The South Building, located directly behind the East Building, houses the following laboratories: Biology, Industrial Engineering, Chemical Engineering, Hydraulics and Sanitary Engineering, and Electrical Measurements and Dynamo Laboratories. In addition, it provides space for department offices, classrooms, conference rooms and one large drafting room.

### *Richards Hall*

Richards Hall is the first unit of the new Northeastern plant. Its 100,000 square feet of floor area provide ample space for administrative offices, the bookstore, Student Union reading and game rooms, Chapel, and many other facilities.

The major portion of the building is given over to laboratories and classroom areas. Laboratory space is provided for the following: Mechanical Engineering, General and Advanced Physics, Inorganic, Organic, Analytical, and Physical Chemistry, together with several special research laboratories.

Outstanding among the classroom areas are a large chemistry lecture hall and two large classrooms seating 300 and 200 students respectively. On the fourth floor are located three large, light and well-equipped drawing rooms, together with an art room for carrying on designing and drafting which form so important a part of technical work. The penthouse contains a radio laboratory, astronomy laboratory, and a lounge for faculty and alumni.

### *Law School Building*

The building housing the Law School at 47 Mt. Vernon Street is a three-story structure completely equipped with administrative offices, faculty offices, classrooms, library and student recreational rooms. The interior of this building is both commodious and new, the entire structure having been recently remodeled by the University.

### *Laboratories*

The laboratories of the University fall into three categories. The first group includes those for experimental work in the pure sciences of biology, chemistry, and physics. The second includes those for the study of engineering in its major branches (civil, mechanical, electrical, chemical, and industrial). The third comprises the business and statistical laboratory.

In addition to these laboratory facilities which are described in the following pages, motion pictures and lantern slides are frequently used to supplement classroom instruction. For this purpose, there are available motion picture projectors for both sound and silent film as well as several lantern slide projectors.



### *Biology*

The Biological Laboratory is located on the second floor of the South Building, and is well equipped with simple, compound, and binocular dissecting microscopes for work in botany and zoology. In addition, the laboratory possesses unusually good zoological, botanical, parasitological and histological collections.

### *Chemistry*

The Chemical Laboratories located on the fourth floor of Richards Hall were given to the University by the Charles Hayden Foundation. They are splendidly equipped for work in general and inorganic chemistry, qualitative and quantitative analysis, and organic and physical chemistry. In addition several service rooms and space for a limited amount of research are provided.

#### *General Chemistry and Qualitative Analysis*

This laboratory is fully equipped with water, gas, electricity, steam, and fume hoods. A hydrogen-sulphide room, a balance room, and a conference room are also a part of this unit.

#### *Organic Chemistry*

This laboratory provides about six feet of working space for each student. The facilities are similar to those in the general chemistry laboratory, and in addition, there is provided a large evaporating unit and an organic combustion furnace.

#### *Quantitative Analysis and Physical Chemistry*

The tables and fume hoods and other equipment in this room are similar to those in the Organic Laboratory. In addition, a large drying oven, special balances, electrical instruments, temperature measuring devices, and other specialized apparatus are provided.

A small laboratory for technical analysis of such materials as coal, vegetable oils, petroleum, textiles, and rubber adjoins the main laboratory, and a special laboratory is also available for electrolytic work.

#### *Research*

Three small laboratories are equipped for advanced research. These are available for graduate thesis investigations.

### *Physics*

The Physics Laboratories located on the second floor of Richards Hall are fully equipped for elementary and advanced study as well as research. In addition an astronomy laboratory and a radio laboratory are located in the penthouse on the West Building.



### *General*

This laboratory, designed for elementary instruction, is provided with gas, water, and electricity. A balance room, a spectrometer room, a photographic room, and a photometer room are directly connected with this laboratory. Sufficient apparatus is available so that ordinarily students may work alone on most experiments.

### *Advanced*

This laboratory is designed with a view to both precision and flexibility. A special switchboard provides single phase and polyphase alternating current and a variety of direct current potentials. A workshop with lathe, drill press, grinder, and other tools as well as two separate research rooms complement the laboratory. A large number of special instruments plus considerable auxiliary apparatus gives a well rounded supply of equipment for advanced study and research.

### *Astronomy and Radio*

The astronomy laboratory is provided with equipment for grinding mirrors and constructing telescopes, and a platform on the roof provides a very good unobstructed view for making observations.

The radio laboratory is a completely shielded room and houses the amateur transmitting station which operates on both radio-telephone and radiotelegraph. Facilities are also available for research.

## *Civil Engineering*

Most of the laboratory work in civil engineering is, of course, actual field work in surveying. A considerable amount of demonstration equipment and models are available for use in the study of structures, hydraulics, and sanitary engineering.

### *Field Work*

The Department of Civil Engineering is provided with a variety of excellent equipment for field work. The instruments have been chosen to make possible the working out of advanced as well as elementary field problems, and to acquaint the students with the principal makes and types of instruments in general use.

### *Hydraulics and Sanitary Engineering*

This laboratory located on the first floor of the South Building is equipped with demonstration measuring devices for use in connection with the courses in hydraulics.

Complete equipment is also provided for water and sewage analysis, and research students can be accommodated in this field.

## *Mechanical Engineering*

The Mechanical Engineering Department has a suite of well equipped laboratories containing a large variety of modern machines and occupying over 10,000 square feet of floor space in the basement of Richards Hall. Special areas have been set aside and equipped for oil testing, concrete mixing, mechanics research, and similar purposes. Auxiliary equipment is, of course, available for making all the usual tests and measurements.

### *Steam Power*

This equipment includes a wide variety of steam engines, turbines, pumps, heat exchangers, and measuring instruments.

The auxiliary steam power plant operated by the University and the Boston Y.M.C.A. is also used for testing purposes. This plant consists of four horizontal return tubular boilers, two burning coal and two burning fuel oil. These feed three reciprocating steam engines and one turbine which in turn drive four direct current generators.

### *Internal Combustion and Aeronautics*

The internal combustion equipment includes a number of gas and oil, automobile, airplane, and Diesel engines. Most of these are set up for running experimental tests, but several are available for dismantling and demonstration purposes.

In addition to the study of airplane engines, the laboratory is equipped with a small wind tunnel for experimental work in aerodynamics.

### *Refrigeration, Heating, and Air Conditioning*

Included under this heading are an ammonia refrigerating machine, a constant temperature room equipped for either heating or cooling, and a large air conditioner unit.

### *Testing Materials and Heat Treatment*

For tension, compression, bending, and shearing tests, the laboratory is equipped with a 300,000 lb. capacity Riehle and a 50,000 lb. capacity Olsen, as well as several smaller testing machines. For other tests the laboratory has cement testers, torsional testing machines, impact testers, fatigue testers, hardness testers, extensometers, oil testing equipment calorimeters, as well as instruments for measuring speed, vibration, temperatures, pressures and flow of fluids.

For heat treatment studies an electric furnace and a gas fired furnace are available. Equipment magnifying up to 2600 diameters is available for photographing crystalline structures, and the laboratory has polaroid equipment for photoelastic stress analysis.

### *Machine Shop*

Adjoining the laboratory is a machine shop fully equipped with machine tools, welding equipment, and a small forge.

### *Electrical Engineering*

The basement of the South Building is occupied by the electrical laboratories. These cover an area of approximately 7,800 square feet and include the dynamo, measurements, and high tension laboratories.

#### *Dynamo*

This laboratory is provided with both 60 cycle 3 phase 230 volt alternating current and 115-230 volt three-wire direct current. The equipment includes more than sixty motors and generators of different types together with the necessary auxiliary equipment to operate and test them. The motors and generators have been selected so as to reduce as much as possible the risk from high voltage while making available to the students a representative range of commercial apparatus.

#### *Electrical Measurements*

The equipment here is of two distinct types: first, that planned primarily for teaching principles of measurement, and secondly, that which is used in teaching advanced standardizing methods as well as for calibrating instruments in other laboratories of the University. Briefly, this laboratory is equipped for practically any work in electrical measurements except for the absolute determinations carried on in national standardizing laboratories.

#### *High Tension*

This laboratory is equipped with the necessary transformers and auxiliary equipment to provide 4 Kva. at 50,000 volts potential. A special room has been equipped for cable and insulation testing, and impulse testing of insulation is made possible by a surge generator capable of producing waves having crest values up to 100,000 volts. A 4,000 ampere low voltage transformer is also available for the study of the effects of heavy currents in conductors, switches, and contacts.

### *Chemical Engineering*

The Chemical Engineering Department has under its supervision the Chemical Engineering Laboratory and the Industrial Chemical Laboratory. These occupy at the present time approximately 1600 square feet of space on the second floor of the South Building.

#### *Chemical Engineering*

This laboratory is primarily devoted to the study of the various unit operations. These include flow of fluids, heat transfer, dis-



tillation, evaporation, absorption, drying, filtration, separation, crushing, and grinding. The equipment, therefore, includes flow meters, condensers, heat exchangers, distillation columns, vacuum dryer, air conditioning cabinet, filter press, screens, centrifuge, crusher, ball mill, and sieve shaker, as well as general equipment such as tanks, blowers, mixers, and scales.

### *Industrial Chemistry*

This laboratory is used mostly for process development work and is equipped with high pressure steam, compressed air, vacuum, and other facilities usually found in a chemical laboratory. Other equipment includes a colloid mill, electric oven, high temperature gas oven, and a hydraulic press.

### *Industrial Engineering*

Students in the Department of Industrial Engineering share in the use of the Mechanical Engineering Laboratories and the Business Laboratory. The Industrial Engineering Laboratory itself is located on the first floor of the South Building and is devoted exclusively to methods engineering (motion and time study work).

### *Methods Engineering*

This laboratory is completely equipped with the latest facilities and tools used by methods engineers. Besides the general equipment consisting of benches, tables, lathe, jigs, fixtures, and racks, the laboratory has an ample supply of time study boards, stop watches and timers for time study work. There is also available complete motion picture equipment and microchronometers for micromotion work.

### *Business Administration*

Students in Industrial Administration share in the use of the Industrial Engineering Laboratory which is devoted to Motion and Time Study work. In addition, all students in the College of Business Administration have access to the Business Laboratory located on the third floor of the East Building.

### *Business Laboratory*

All of the commonly used office machines are available for laboratory work in accounting and statistics. These are available in a special room together with necessary library services, including Moody's Manuals, Poor's Manuals, and various charts and maps. The laboratory is in charge of a graduate assistant whose work is to maintain the machines in excellent condition and to give instruction in their uses. Principal pieces of equipment include duplicators, typewriters, hand and electric calculators, and hand and electric adding machines.



## *Design and Drafting Rooms*

The University possesses large, light, and well-equipped drawing rooms for the carrying on of the designing and drafting which form so important a part of engineering work. These rooms are supplied with lockers containing the drawing supplies, files containing blue prints, and photographs of machines and structures that represent the best practice. Drafting room blackboards are equipped with traveling straight edge devices which facilitate speed and accuracy in blackboard demonstrations.

## *Libraries*

The new library is located on the first floor of the East Building. The reading room seats 244 students at one time, and the stack capacity approximates 25,000 volumes. Here are available all of the general reference books, most of the professional and scientific volumes, and most of the periodicals to which the University subscribes.

Library hours are as follows:

8:45 A.M. to 10:00 P.M. Mondays through Fridays

8:45 A.M. to 1:00 P.M. Saturdays

Closed on Sundays and Holidays

The library is under the direction of a librarian and three assistants all of whom have had special training for the work.

A general reading room and library is maintained by the Northeastern Student Union in Room 356, Richards Hall. The books located here are chiefly non-technical works dealing with contemporary affairs, religious problems, international relations, travel, etc., among which students may browse during periods of relaxation. A few of the literary and religious periodicals are also available in this room.

## *Boston Public Library*

All members of the University, whether resident or non-resident students, have the privilege of taking books from the Boston Public Library and of using the library for general reference and study. Inasmuch as this is one of the best in the country, it presents unusual opportunities to the students. Within a few minutes' walk from the University, it enables students to have unlimited reference at any time to books and periodicals bearing upon their studies.

## *Lecture Assembly Halls*

Through special arrangement, Jordan Hall, Symphony Hall, and the Boston Opera House are made available for assembly purposes. These halls provide ample space for student activity assemblies and for special lectures by noted men. All the students in college at any period assemble for one hour each week throughout the college year. More than half of the assembly sessions are devoted to interests and activities developed by the students themselves. The other assembly periods are devoted to special lectures, sometimes under the direction of the student body and sometimes under the direction of the faculty. The special lectures are devoted to those elements of life which count most in the development of a man's viewpoint and his character.

## *Equipment for Physical Training*

Northeastern has exceptional facilities for all-round physical training. The gymnasium is one of the most complete in New England. Adjoining Richards Hall is a large field equipped for athletics. Here are two tennis courts, an outdoor gymnasium, a rifle range, a baseball cage, jumping pits, and a track with a 100-yard straightaway.

## *Natatorium and Gymnasium*

The Natatorium of the University is located in the East Building between the assembly hall and gymnasium. It is 75 feet long and 25 feet wide and is generally regarded as the finest of its kind in this area.

The Gymnasium is known as the Samuel Johnson Memorial Gymnasium and provides the following facilities: three gymnasiums, a twelve-lap running track, two large exercise rooms, boxing and wrestling rooms, handball and squash courts, bowling alleys, showers, steam baths, massage rooms, electric cabinet baths, and locker rooms.

## *Huntington Field*

Huntington Field, the University athletic field, is located on Kent Street in Brookline and provides ample facilities for track, baseball, football and other outdoor sports. The University maintains bus service between its Huntington Avenue plant and the Huntington Field making it possible for students to get back and forth with a minimum loss of time. The field is equipped with a new and commodious field house as well as ten sections of stadium seats for spectators.

## *Student Activities*

NORTHEASTERN University regards student activities as an integral part of its educational program. One of the main departments of the University is charged with the responsibility of co-ordinating the various types of activities and of administering the social, musical, literary, and athletic organizations in such a way as to enable each to contribute in a wholesome, worth while manner to student life at Northeastern. Every student is encouraged to participate in such activities as may appeal to him, although a standard of scholarship which is incompatible with excessive devotion to such pursuits is required of all students.

Members of the faculty also are interested in the informal aspects of the college program. Teaching loads are kept sufficiently low so that the instructional staff may have ample opportunity to mingle with students outside of the classroom in social activities and on the athletic field. In fact, some member of the faculty is appointed to serve as adviser for each student activity. His function is not to dictate how the organization shall be run, but to encourage the students in their extra-curricula endeavors and to give them the benefit of his mature point of view in solving the problems that inevitably arise.

One of the outstanding contributions of the co-operative plan in the field of higher education has been its capacity to develop in students those powers of social understanding that are so essential to success in professional life. At Northeastern the program of student activities is made to contribute to this end in a very real way. It is a conscious aim of the student activities advisers to develop among their advisees those qualities of personality and character which will enhance their usefulness as future professional men and citizens. Students have splendid opportunities to develop administrative and executive ability as leaders of undergraduate organizations. No academic credit is awarded for any student activity. This has been no deterrent, however, to student participation in extra-curricula activities, for a recent survey of the undergraduate body showed that over 90% of the enrollment were engaged in one or more forms of student activity.

### *Student Council*

Student government of the Day Colleges at Northeastern University is vested in the Student Council, composed of elected representatives from the various classes. The Council is the authority on all matters relating to student policies not definitely connected with classroom procedure. It has jurisdiction, subject



to faculty approval, over all such matters as customs, privileges, and campus regulations. The Dean of Students serves as faculty adviser to the Student Council.

### *Northeastern Student Union*

The purpose of the Northeastern Student Union is to carry out the work of a Christian association within the University. It endeavors to deepen the spiritual lives of Northeastern men through the building of Christian character, to create and promote a strong and effective Northeastern University spirit in and through a unified student body, to promote sociability, and to emphasize certain ethical, social, civic, intellectual, economic, physical, vocational, and avocational values.

All students are encouraged to participate in the activities of the Union, no matter what their religious faith, as the work of the Union is entirely non-sectarian. A good moral character is the only requirement for eligibility to membership. It is hoped that as many students as can will participate in this ideal extra-curricula work.

The Union conducts a weekly Chapel Service in the little chapel in Richards Hall, to which all faculty members and students are invited. The service, which is non-sectarian and voluntary, is held on Thursday mornings from 8:40 to 8:55 o'clock. Many eminent preachers of Greater Boston are engaged to deliver brief addresses.

### *Athletic Association*

All students in the Day Colleges are members of the Northeastern University Athletic Association. Policies of the association are passed upon by a Faculty Committee on Student Activities. This committee decides what students are eligible to participate in athletics, what the various sports schedules shall be, and what students may be excused from classes to represent the University on athletic trips.

The actual administration of the athletic program is in the hands of a second committee, known as the General Athletic Committee, which consists of the Director of Student Activities, the captains and managers of all varsity teams, and the coaches as ex officio members.

The University maintains both varsity and freshman teams in baseball, basketball, cross-country, football, hockey, and track. Intercollegiate games and meets are arranged with the leading colleges in the East. In addition to intercollegiate athletics the athletic association conducts an intramural program in various sports.



### *Publications*

#### *"The News"*

A college newspaper, the *Northeastern News*, is published each week throughout the college year by a staff selected from the student body. The copy is prepared, edited, and published by the students themselves with the counsel of a faculty adviser. Opportunity is afforded for the students to express their opinions on subjects relating to study, co-operative work, social events, or topics of the day. Positions on the *News* staff and promotions are attained by competitive work. The paper is in part supported by advertising, both national and local, and in part by a portion of the student activities fee. The *Northeastern News* is a member of the Eastern Intercollegiate Newspaper Association, and sends one of its editors to the annual convention of this association each year. Copies of the *News* are mailed to upperclassmen when they are at co-operative work and to freshmen after the close of their college year.

#### *"The Cauldron"*

The combined senior class publishes annually a college year book, *The Cauldron*. It is ready for distribution in the latter part of the second semester and contains a complete review of the college year with class histories, pictures of all seniors, of the faculty, and of undergraduate groups, as well as a miscellany of snapshots and drawings contributed by students.

### *Honor Societies*

Three honorary societies are chartered by the University in its Day Colleges:

The Senate, in the College of Engineering.

The Sigma Society, in the College of Business Administration.

The Academy, in the College of Liberal Arts.

Election to the college honorary societies is founded primarily upon scholarship, but before a man is privileged to wear the honorary society insignia he must give evidence of an integrity of character and an interest in the extra-curricula life of the University as well as an acceptable personality. The Societies have memberships consisting of the outstanding men in the Day Colleges. Election to the honorary society is the highest honor that can be conferred upon an undergraduate.

### *Professional Societies and Clubs*

To assist in the promotion of social, cultural, and intellectual advancement through informal channels, a number of professional societies and clubs are sponsored.

### *National Engineering Societies*

Students in the several professional curricula of the College of Engineering operate Northeastern University Sections of the appropriate national engineering societies. Chief among these are the following:

- American Society of Civil Engineers
- Boston Society of Civil Engineers
- American Society of Mechanical Engineers
- American Institute of Electrical Engineers
- American Institute of Chemical Engineers
- Society for the Advancement of Management

Members of the engineering faculty who hold membership in the parent organizations serve as advisers to these student groups. Meetings are held regularly, usually at night so that students from both divisions may attend, and practicing engineers are invited to address the sections. Occasionally appropriate motion pictures are shown, or the group visits some current engineering project in the vicinity of Boston. The College of Engineering encourages these student sections of the technical societies in the belief that they provide a wholesome medium for social intercourse as well as a worth while introduction to professional life.

Membership in the student sections of the American Society of Civil Engineers and Boston Society of Civil Engineers, the American Society of Mechanical Engineers, or the American Institute of Electrical Engineers also includes membership and privileges of the Engineering Societies of New England. This organization is an affiliation of all the major technical societies of Boston and vicinity and provides valuable lectures, smokers, and informal meetings with the outstanding men engaged in engineering work in Boston and vicinity.

### *Astronomy Club*

Membership in the Astronomy Club is open to all students in the College of Engineering who maintain satisfactory scholastic standing. The club has access to machine shops for the construction of telescopes and other instruments. It also has quarters in the penthouse on the fifth floor of Richards Hall. Meetings are held twice a month for the purpose of making astronomical observations and carrying on appropriate discussions.

### *Banking and Finance Club*

The purpose of this organization is to increase among its members the knowledge of the theory and practice of banking. Any student of Northeastern University, while enrolled in any of the banking courses of the College of Business Administration, is eligible to active membership in this club. Meetings are held each



ten week period at which banking executives from Greater Boston are invited to discuss current issues in the field.

### *Camera Club*

The Camera Club welcomes all men interested in photography. Weekly discussions and special evening lectures by guest artists are part of the yearly program. Field trips, monthly photo contests and a general exhibition add to the interest and progressive work of this organization.

### *Chess Club*

The Chess Club gives both beginners and experts an opportunity to enjoy the game. Yearly tournaments are held among the members and, in past years, the best men have engaged in inter-collegiate competition.

### *Combined Musical and Dramatic Clubs*

The Department of Student Activities sponsors the following musical clubs: a concert orchestra, a band, a glee club, a banjo club, and a dance orchestra, for which all students with musical ability are eligible. Membership in the various musical clubs is attained by competitive effort.

Each organization has a faculty adviser and each elects a representative to the Musical Clubs Council. The purpose of this council is to co-ordinate the various musical activities of the Day Colleges. At the annual Musical Clubs Banquet, held early in the spring, charms are awarded to the leaders and managers of the several clubs and to members who have played over a period of three full years.

The various musical clubs, in conjunction with the Dramatic Club, combine in an annual mid-winter entertainment and participate in occasional outside public engagements throughout the college year.

Students interested in dramatics have an opportunity to cultivate this art under faculty coaches who co-operate with the Dramatic Club in the production of several pieces in the course of each college year. Frequently the Northeastern Dramatic and Glee Clubs collaborate with those of Simmons College in light operas such as those of Gilbert and Sullivan.

### *Debating Society*

The purpose of the Debating Society, formed in 1936, is "to foster and promote an interest and facility in formal argumentation; to develop an impartial, unbiased, and intellectual consideration of questions and issues of current interest; and to sponsor intercollegiate relationships and competition in the debating field." Membership is open to all students of the Day Colleges.

### *German Language Club*

Students are given an opportunity in this club to use their knowledge of German in ways that give them entertainment as well as a greater appreciation of foreign customs and literature.

### *International Relations Club*

The International Relations Club was founded in 1932 for the purpose of studying and discussing those current national and international events and issues which vitally concern our American life and institutions.

It is the intention of the club to deal with all questions in an impartial and broadminded manner, and to take an intelligent and effective part in promoting international understanding and harmony. The club maintains contacts with similar organizations in other colleges.

Membership is not open to freshmen, and only to those upperclassmen who maintain good scholarship.

### *Law and Accounting Club*

All students interested in accounting and law are invited to join this stimulating club. Problems and cases involving the interrelations of accounting and law are presented and discussed at club meetings. Although upperclassmen usually present problems arising out of thesis or co-operative work, speakers from the professional world come to the meetings to present papers and lead the student discussion.

### *Mathematics Society*

The Mathematics Society encourages the study of topics of mathematical interest which are either outside or beyond the scope of the regular mathematics courses. Membership is restricted to those men who have completed one and one-half years of study in mathematics and have an average grade of not less than "C" in mathematics courses up through differential calculus. The club meets once every five weeks in the evening. Although membership is limited to upperclassmen, any student is always welcome to any meeting, and freshmen especially interested in mathematics are always welcome.

The final program of the year is devoted to a dinner meeting for which some prominent outside speaker is procured.

### *N. U. Chemical Society*

This organization of chemists (as distinguished from chemical engineers) was formed to meet the growing need among those students majoring in chemistry for a professional society of their own. The meetings are devoted to a discussion of problems in the field of pure chemistry.



*Radio Club*

One of the most popular undergraduate activities is the Radio Club. Members are provided opportunity for code practice and are encouraged to obtain their amateur licenses. The Club owns and operates station W1KBN, a short wave transmitter, located in the Radio Laboratory in the penthouse of Richards Hall. Meetings are held about once a month for the discussion of technical matters. Practicing radio engineers are frequently invited to address the Club at evening meetings, when students in both divisions may attend.

*Rifle Club*

Organized a number of years ago, the Rifle Club was so successful that in 1933 riflery was recognized as a minor sport. Members of the club are given instruction in the art of rifle shooting. Those students who excel in intra-mural competition are selected for the team representing the University in intercollegiate contests. Practice sessions are held twice a week in the University rifle range. Membership is open to all students.

*Yacht Club*

Only recently formed, the Yacht Club has taken steps to enter the Intercollegiate Yacht Racing Association, and a drive is under way to procure boats for the use of the members.

*Class Organization and Activity*

Each of the classes in the Day Colleges elects its officers and carries on activities as a class. Dances are sponsored by the classes at regular periods throughout the year. One of the high lights of the social program is the Junior Promenade, held each spring at one of the Boston hotels.

Seniors plan a whole week of activities just prior to Commencement in June.

Freshmen are required to wear the red and black cap distributed through the Department of Student Activities in order that they may be readily distinguishable to each other and to upperclassmen.

*Convocations*

The hour from 12:00 to 1:00 on Wednesdays throughout the year is set aside for convocations. Attendance is compulsory. Arrangements are made to bring before the student body some of the ablest and foremost thinkers of the day. A list of speakers

for the year will be found on page 15 of this catalogue. When the convocation hour is not occupied by a University lecturer, class meetings, concerts, or athletic rallies are held instead. Such gatherings are under the direction of the Department of Student Activities.

### *Fraternities*

There are at present ten local Greek letter fraternities chartered by Northeastern University. Each fraternity is provided with a faculty adviser who is responsible for the proper administration of the fraternity house under the rules and regulations established by the faculty. The list of fraternities in the order of their establishment is as follows:

- |                       |                     |
|-----------------------|---------------------|
| 1. Alpha Kappa Sigma  | 6. Phi Beta Alpha   |
| 2. Beta Gamma Epsilon | 7. Phi Gamma Pi     |
| 3. Eta Tau Nu         | 8. Sigma Phi Alpha  |
| 4. Nu Epsilon Zeta    | 9. Kappa Zeta Phi   |
| 5. Sigma Kappa Psi    | 10. Gamma Phi Kappa |

Elected representatives from each fraternity make up an Inter-Fraternity Council, a body which has preliminary jurisdiction over fraternity regulations. Its rulings are subject to the approval of the Faculty Committee on Student Activities.

## *The Alumni Association*

The alumni of the Day Colleges are organized to promote the welfare of Northeastern University, to establish a mutually beneficial relationship between the University and its alumni, and to perpetuate the spirit of fellowship among members of the Alumni Association.

The work of the General Alumni Association is supplemented by the activities of regional alumni clubs located throughout the east and middle west. The local clubs meet periodically in their respective centers to discuss matters pertaining to the University and its alumni. Meetings are also held in conjunction with the visits of Northeastern's athletic teams to the various club centers.

### *Officers of the Alumni Association*

#### *President*

GEORGE A. MALLION '20

#### *Secretary*

RONALD C. DAVIS '40

#### *Vice President*

JAMES W. DANIELS '25

#### *Treasurer*

WILLIS P. BURBANK '31

### *Executive Committee*

SIDNEY A. STANDING '32

KENDALL BLANCHARD '29

JAMES W. DANIELS '25

GEORGE DAVENPORT '28

EARL H. THOMSON '25

HAROLD L. BURTON '29

#### *Alumni Executive Secretary*

RUDOLF O. OBERG '26

#### *Alumni Faculty Representative*

G. HARRY MESERVE '25

### *Alumni Council Representatives*

1913-1920—

LAWRENCE F. BLACKWELL

BERNARD H. CAPEN

PERRY F. ZWISLER

1921—ROGER E. SPEAR

1922—RAYMOND J. BRADBURY

1923—EDWARD J. PERRY

1924—H. RAYMOND BENSON

1925—RENE G. MAURETTE

1926—HERBERT A. WILSON

1927—WILLIAM J. URQUHART

1928—EARL R. GRANT

1929—JAMES H. KINGHORN

1930—

ALEXANDER G. MACGREGOR

1931—JOHN E. VADALA

1932—RAYMOND W. JAMES

1934—JAMES P. SCOBIE

1935—EDWARD V. KIRKLAND

1936—E. STANLEY NOWERS

1937—WARREN L. GANONG

1938—HAROLD R. BONNYMAN

1939—WILLIAM E. FEIDT

1940—WALLACE E. MCQUARRIE

1941—



## THE COLLEGE OF BUSINESS ADMINISTRATION

### *Aims and Methods*

FORMERLY when a student finished high school and decided to make his way in the business world he could go about it in one of two ways: (1) Obtain a position in a particular field of commerce or industry and by beginning at the bottom learn the business from the job of the office boy to that of the president, or (2) enter a liberal arts college and after four years of general study enter business just as he would have had he not attended college. It was hoped that his broad college training and collegiate contacts would push him along "through the ropes" faster than the young man who went straight into business from high school. In either event this system of apprenticeship worked out very well in training a man in business and those who had the push and ability went to the front. This continued just so long as business organization was limited to relatively small units. In the small business there was time and opportunity for employer and employee — boss and apprentice — relationships. A man could learn much from his superiors, and recognition in the way of promotion in salary or responsibility rewarded those whose ability warranted it.

### *The Problem of Today*

What of today? Can a student go "through the ropes" and progress today as his father did in his youth and early manhood? The answer is: probably not. We can see just reason for the negative answer when we consider our present business world. We are surrounded on every hand by "big business" where the employee is lost in the vast number of workers of every large organization. The old time employer who trained his own men is passing out of the business scene. This does not mean that there is any less need for training about the conduct of business. It does mean that the training has to be done by some other person or institution especially equipped to do the job in a most thorough manner. Actually the training for business positions of real importance is more necessary today than ever before. To satisfy this very apparent need colleges of business administration have appeared and grown in size and importance within the last twenty-five years. Among institutions for the training of young men who intend to undertake business as a profession, Northeastern University offers to those properly qualified a college training in business administration, leading to the degree of Bachelor of Science in Business Administration.



### *Business Education on the College Level*

Although it is true that collegiate training for business is relatively new in the field of higher education, it is also evident that collegiate business schools are beyond the stage of early experimentation and have emerged on a level with other college courses recognized as higher education. There is a certain advantage in newness in that the mere youth of the college keeps it up-to-date in its outlook and scope of activity. In addition it is not bound by the traditional but obsolete practices sometimes found in older branches of education.

We hear a good deal today about the increasing need for specialists in business. It is asserted that modern business institutions have become so large that no one man can administer the many matters of routine involving executive judgment. The need for specialists is self-evident, but the training best suited for preparing the individual to take over specialized executive authority is not so evident. There are many schools offering a short course of training in preparation for these specialized positions. Such training cannot give a man the breadth of vision needed to go beyond minor managerial jobs demanding attention to exhausting details of daily routine.

To pass beyond this on the way to responsibility of truly executive nature a background of general business and related knowledge is essential. This background should precede the specialized study into a particular branch of business, enabling one to see the whole business and industrial picture and not merely one branch of it. Executive administration cannot be taught with any adequacy by attacking one subject, no matter how carefully planned the approach and how thorough the course of study. For instance, accounting is not the only means of arriving at a production budget based on sales estimates; it is but one of the tools. A knowledge of marketing, finance, statistics, and management technique are also needed. Vision and sound judgment can then make all of these branches of information serve to best advantage.

### *Aims of the College*

In keeping with current trends in collegiate business education the educational policy of the College is directed toward the achievement of the following purposes:

*First:* To offer that type of education for business which will enable students to select most advisedly the field of business best suited to their aptitudes. The co-operative plan is particularly effective in this respect.

*Second:* To build for breadth of perspective in preference to over-specialization with its narrowing effects; therefore, to elim-

inate haphazard selection of courses, through concentration upon balanced, carefully co-ordinated curricula, and thus to provide an adequate background for specialization as need arises.

*Third:* To provide a thorough knowledge of fundamental economic laws and an understanding of their applications in business.

*Fourth:* To develop the habits of accurate thinking that are essential to sound judgment.

*Fifth:* To develop in all students attitudes and ideals that are ethically sound and socially desirable.

### *Methods*

In order that these aims may be realized as fully as possible, the College makes use of the problem and the case methods of instruction in addition to the lecture and recitation system. Mere textbook reading alone is almost valueless; students tend to accept without question what the textbook presents. Instead, they should learn to analyze every proposition, to challenge unsupported assertions, to think independently, and to support their thinking with logic and facts.

Hence, concrete problems and cases which executives have faced in accounting, marketing, organizing, and the like, constitute the bulk of class work. Students analyze problems, break them into their constituent parts, discover and list the factors for and against possible solutions, and work out a logical conclusion. In class they discuss their work with their instructors in the light of the latter's broader knowledge.

Such a method tends to develop an executive attitude. No lecture or mere reading of textbooks can do so. Students gain skill and facility in solving problems by actually solving many hundreds of them, thereby accumulating a ripe experience seldom open to the petty employee buried in routine and mechanical detail. What counts in business, as elsewhere, is not solely whether one possesses much knowledge, but whether through his knowledge one can logically and effectively solve the problems he confronts, or possibly prevent problems from arising. Experience in solving typical problems provides a background for anticipating and forestalling similar ones as well as for solving others that may arise.

### *Equipment*

#### *Visual Education Equipment*

Classroom instruction is made more effective by the use of motion pictures and lantern slides. For this purpose there are available projectors for 16 mm. and 35 mm. films. Complete

sound motion picture apparatus is also available. New and powerful Delineascopes project the lantern slides. Stationary as well as portable day light screens enable students to take notes while viewing the pictures.

#### *Business Laboratory*

Students have available for laboratory work in accounting and statistical methods all of the commonly used office machines. These are available in a special room together with necessary library services, including Moody's Manuals, Poor's Manuals, and various charts and maps.

The laboratory is in charge of a graduate assistant whose work is to maintain the equipment in excellent condition and to give instruction in the use of the various office machines.

Principal pieces of equipment in the laboratory include duplicators, typewriters, hand and electric calculators, and both hand and electric adding machines.

#### *Bureau of Business Research*

The primary purpose of a College of Business Administration is to train young men in business, but it has also an obligation to the business community to co-operate in the improvement of its business practices and the solution of its everyday business problems. One means of fulfilling this obligation is to co-operate with business and industrial leaders in the conducting of research investigations pertaining to these problems. To these ends the Bureau of Business Research of the College of Business Administration at Northeastern University was organized.

The staff of the Bureau investigates and reports research projects under the direction of a faculty Board of Editors within the scope of the following stated purposes and policies:

- I. To co-operate with business and industry in the development, perfection, and reporting of improved technics and practices of management.
- II. To make studies and conduct research into the problems of New England business and industry with respect to:
  - (1) Community industrial and business development.
  - (2) Expansion of markets for New England industry and business.
  - (3) Those aspects of New England business which militate against harmony between the community and its business enterprises.

Research reports of the Bureau are published as a part of the Northeastern University series of publications. They are distributed without charge upon application to the Director of the Bureau.



## *Admission Requirements*

**A**PPPLICANTS for admission to the freshman class without restrictions must qualify by one of the following methods:  
 1. Graduation from an approved course of study in an accredited secondary school, including prescribed subjects listed below.

2. Completion of fifteen acceptable secondary school units with a degree of proficiency satisfactory to the Department of Admissions.

3. Examinations.

(Certificate of entrance examinations passed for admission to recognized colleges and technical schools may be accepted.)

### *Prescribed Subjects for Admission*

#### *College of Business Administration*

Mathematics (Algebra recommended)	1 unit
Natural Science	1 unit
History, Social Studies and/or foreign language	3 units
English	3 units
*Electives	7 units
	<hr/>
Total	15 units

A unit is a credit given to an acceptable secondary school course which meets at least four times a week for periods of not less than forty minutes each throughout the school year.

Entrance examinations are not required of students whose transcripts of record are acceptable, but the Committee on Admission reserves the right to require a candidate to present himself for examination in any subjects that it may deem necessary because of some weakness in his secondary school record.

### *Other Requirements*

These formal requirements are necessary and desirable in that they tend to provide all entering students with a common ground upon which the first year of the college curriculum can be based. But academic credits alone are not an adequate indication of a student's ability to profit by a college education. Consequently the Department of Admissions takes into consideration, along with the formal requirements stated above, many other factors regarding candidates for the freshman class. A student's interests and aptitudes in so far as they can be determined, his capacity for

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\*Not less than four of the "electives" must be in one or more of the following academic branches: Languages, Natural Science, Mathematics, Social Sciences, History.



hard work, his attitude toward his classmates and teachers in high school, his physical stamina, and most important of all — his character, all these considerations are carefully weighed. In this way the University seeks to select for its student body those who not only meet the academic admission requirements but who also give promise of acquitting themselves creditably in the rigorous program of training afforded by the co-operative plan and of later becoming useful members of society.

### *Personal Interview*

Candidates for admission should communicate with the Director of Admissions, who will advise them frankly on the basis of past experience. A personal interview is always preferred to correspondence, and parents are urged to accompany their sons whenever this is possible. Effective guidance depends in large measure upon a complete knowledge of a candidate's background and problems. Parents invariably are able to contribute much information that aids the admissions officer in arriving at a decision. In general, a student is likely to be more successful in his college work if he does not enroll under the age of seventeen.

Candidates are urged to visit the Office of Admissions for personal interview if it is possible for them to do so before submitting their applications. Office hours of the Department are from 9:00 A.M. to 4:00 P.M. daily; Saturdays to 12:00 M. The Director of Admissions will interview applicants on Wednesday evenings but by appointment only.

### *Application for Admission*

Each applicant for admission is required to fill out an application blank whereon he states his previous education, as well as the names of persons to whom reference may be made in regard to his character and previous training.

An application fee of five dollars (\$5.00) is required when the application is filed. This fee is non-returnable.

The last page of this catalogue is in the form of an application blank. It should be filled out in ink and forwarded with the required five dollar fee to the Director of Admissions, Northeastern University, Boston, Mass. Checks should be made out to Northeastern University.

Upon receipt of the application, properly filled out, the College at once looks up the applicant's references and secondary school records. When replies have been received to the various inquiries, the applicant is informed as to his eligibility for admission.

Applications should be filed not later than May first, thus allowing ample time for the investigation of the applicant's secondary school records before he enrolls in the College.

The University reserves the right to place any entering student upon a period of trial. Whether he shall be removed from trial at the end of this time or requested to withdraw will be determined by the character of the work he has accomplished and his conduct during this trial period.

### *Registration*

Eligibility for admission does not constitute registration. Freshmen register at the University on September 10, 1942. No student is considered to have met the requirements for admission until he has successfully passed the required physical examination.

### *Advanced Standing*

Students transferring from approved colleges will be admitted to advanced standing provided their records warrant it. Whenever a student enters with advanced standing and later proves to have had inadequate preparation in any of his pre-requisite subjects, the faculty reserves the right to require the student to make up such deficiencies.

Applicants seeking advanced standing should arrange to have transcripts of their previous college records forwarded with their initial inquiry. Students admitted to advanced standing are not eligible for placement for co-operative work until they have completed a full year of academic work at the University.

### *Entrance Examinations*

Students who are deficient in required units for admission may remove these deficiencies by examination. Such examinations are held at the university unless special arrangements are made with the Department of Admissions to administer them elsewhere.

Students are advised to take such examinations on the earliest possible date in order that any deficiencies which they fail to clear may be made up in time to permit registration with the desired class and division.

The time of examinations is as follows:

10:00 A.M. to 12:00 M.  
1:00 P.M. to 3:00 P.M.

During the current year examinations will be given on the following days: June 3, 1942, September 3, 1942. All other examinations will be given by special assignment.

## *Requirements for Graduation*

Students may qualify for the degree of Bachelor of Science in Business Administration in one of the following options:

Accounting, Marketing and Advertising, Public Administration, Banking and Finance, Industrial Administration, Journalism.

Candidates for the Bachelor of Science degree must complete all of the prescribed work of the curriculum in which they seek to qualify with a degree of proficiency acceptable to the faculty. Students who undertake co-operative work assignments must also meet the requirements of the Department of Co-operative Work before they become eligible for their degrees.

No student transferring from another college or university is eligible to receive the B.S. degree until he has completed at least one academic year at Northeastern immediately preceding his graduation.

### *Scholarship Requirements*

Any student who fails to show a satisfactory standard of general efficiency in his professional field may be required to demonstrate his qualifications for the degree by taking such additional work as the faculty may prescribe. If he is clearly unable to meet the accepted standard of attainment, he may be required to withdraw from the University. The degree conferred not only represents the formal completion of the subjects in the selected course of study but also indicates professional competence in the designated field of business administration.

### *Graduation with Honor*

Candidates who have achieved distinctly superior attainment in their academic work will be graduated with honor. Upon special vote of the faculty a limited number of this group may be graduated with high honor or with highest honor. Students must have been in attendance at the University at least three years before they may become eligible for honors at graduation.

### *Thesis Option*

Theses are not required of candidates for the degree of Bachelor of Science in Business Administration. Students who show special aptitude for thesis work, however, may be permitted to substitute an appropriate thesis for equivalent work in class. Such permission must be obtained by the candidate from the Dean of the College.



## *The Programs of Study*

### *First Year*

A FULL YEAR of thirty-five weeks is devoted to a thorough understanding of the basic principles underlying the conduct of business, including the Legal Bases of Business — how business is organized and protected under the law.

The student is also acquainted with the existing business structure and given an appreciation of its conception and growth in terms of the distribution of industrial resources, and the historical development of business and industry.

Other basic courses are in keeping with the personal needs of the student and preparatory to the work which follows in the upper years of his course. Throughout the year each student has the friendly counsel and guidance of a faculty adviser whose aim is to help bridge the gap between high school and college.

### *Second Year*

Co-operative training is started in the second year. Two ten-week terms of college work are required. Twenty-six weeks of business practice with co-operating firms may be included. The academic training continues the foundation program in economics, finance, marketing and accounting. At this point, also, special attention is given to the student's prospective needs during and after his college career by way of expressing himself orally and in writing, giving particular attention to the development of an effective style for business writing of every sort.

### *Third Year*

In the third year, the completion of the foundation program gives way to the beginnings of specialized training. The student rounds off his work in the third year through the study of economic problems, corporation finance, money and banking, industrial management, and a course in advanced accounting.

At the end of the third year the students elect the professional curricular offerings in accordance with their major fields of interest and natural aptitudes.

### *The Professional Options*

All students are required to take common courses in their fourth and fifth years which are deemed necessary for a well rounded training. These are pursued jointly with the professional



work which has been selected, with a view to meeting the changing and expanding needs of present day business conduct, while at the same time meeting the vocational needs of the students by way of earning a living. A brief statement of the vocational opportunities in the fields of work represented by each of the professional options follows:

### *I. Accounting*

Many successful careers are open to the professional accountant. His services are demanded by business, commerce and industry. Public and private enterprises seek adequately trained men. Better known among the wide variety of titles descriptive of their work are: public and private accountant, cost accountant, resident and traveling auditor, credit manager, statistician, investigator, adjuster, and financial accountant.

### *II. Banking and Finance*

Financial institutions serving present day business and industry are its life stream. Any list of these organizations which are indispensable in the conduct of business must include: banks, insurance companies, investment houses, credit concerns, financial exchanges, business forecasting organizations, financial service institutions, mortgage companies, national and local real estate brokerage firms, and appraisers.

Specific courses offered in Northeastern University's College of Business Administration open the door to a host of careers in these institutions as well as the many governmental regulatory agencies controlling their operations.

### *III. Marketing and Advertising*

Business and industry must sell their services and products to each other and to the general public. Successful selling means more than being a salesman. It demands knowledge of distribution channels, markets and buying habits, as well as sales resistance. It means also, knowing how to buy in order to sell and then how to organize, promote, and carry out a sales campaign.

The following list is representative of the vast array of Marketing and Advertising occupations: sales manager, supervisor, analyst and correspondent, advertising manager, promotion manager, copy supervisor, space buyer, and publicity director; market, product and sales analyst, industrial salesman, sales personnel supervisor, field representative, missionary salesman, and manufacturer's agent.

#### *IV. Industrial Administration*

Increasingly the manufacturer is looking to the business school for well trained men to undertake cost work, production control, planning, methods analysis, and the solution of sales problems peculiar to the manufacturer. Moreover, Industrial Administrators are increasingly turning attention to the effective administration of better employer-employee relations. This points the way toward a growing need for trained managers of personnel relations.

The vocational opportunities of industrial administration include: personnel management, traffic management, office management, industrial purchasing; manufacturing, supervisory and executive work, inventory and production control, production planning, setting shop standards, wage rate administration, and supervision of shop personnel.

#### *V. Public Administration*

The tremendous increase in the number of agencies regulating both public and private enterprise has opened up an increasing number of desirable career posts in both the state and federal governments. These afford real opportunities for those who have training in the fundamentals of business, together with special training in the problems of administration as related to government work. The typical positions include: division chiefs, bureau heads, department heads, foreign and domestic representatives of the many departments, bureaus and agencies of our government.

#### *VI. Journalism*

No professional field of work commands greater public attention and respect than Journalism. The development, promotion, operation, and management of the many city, town, and country newspapers, multitudinous magazines, journals, house organs, company newspapers, etc., require sound business training and definite knowledge of the relationships of business management, including advertising, sales promotion as well as an ability to write.

The business school graduate is at a premium, therefore, in the field of Journalism. The publishing business is one requiring an executive personnel that is both broad and well trained. The specialist in this field handles circulation as well as advertising, and distribution as well as production of the publication itself.

### *Pre-legal Curriculum*

Effective September 1, 1938, by a ruling of the Supreme Judicial Court of Massachusetts, in order to be eligible for examination for admission to the Bar, an applicant must have completed certain

general educational requirements before beginning his legal education. Briefly, this general education must comprise graduation from a four-year high school and the completion of not less than half of the work accepted for the Bachelor's degree in a college approved by the Board of Bar Examiners.

Recognizing that business training furnishes an excellent background for pre-legal training, the College of Business Administration offers a pre-legal curriculum. This consists of taking an amount of work in the College equivalent to that required for admission to specific law schools in the Commonwealth, and usually requires residence in school during the entire freshman year and for 30 weeks during the sophomore year. The approximate cost for the normal pre-legal program is \$600. Students should consult with the Dean of the College before electing a pre-legal program.

#### *Four-Year Option in Business Administration*

In view of the present national emergency, students in the College of Business Administration who have completed the first three years of their scholastic program may petition to attend school for forty consecutive weeks during their fourth school year. This makes possible completion of the requirements for the degree of Bachelor of Science in Business Administration in four years instead of five. Students wishing to make such a petition must consult with the Dean of the College.

No petitions will be granted except as students have a satisfactory scholastic record and are free from obligations to employers under co-operative work agreements.

## I. Accounting

FIRST TERM			SECOND TERM		
No.	Course	Semester Hours	No.	Course	Semester Hours
<i>First Year</i>					
E 1-B	English . . . . .	3	E 2-B	English . . . . .	3
Gv 1	American Government . . . . .	3	Gv 2	American Government . . . . .	3
P 1-A	Surv. of Phys. Science . . . . .	4	P 2-A	Surv. of Phys. Science . . . . .	4
Ec 1	Economic Geography . . . . .	4	Ec 2	Comm. & Ind. Hist. of U. S. . . . .	4
L 1	Legal Bases of Bus. . . . .	3	L 2	Business Associations . . . . .	4
PE 1	Hygiene . . . . .	1		Orientation . . . . .	0
PE 3	Physical Training . . . . .	0	PE 4	Physical Training . . . . .	0
		<u>18</u>			<u>18</u>
<i>Second Year</i>					
E 3-B	Report Writing . . . . .	2	E 4-B	Business Correspondence . . . . .	2
Ec 3	Economic Principles . . . . .	2	Ec 4	Economic Principles . . . . .	2
FI 3	Business Finance . . . . .	3	FI 4	Business Finance . . . . .	3
Ps 1-B	Psychology . . . . .	2	Ps 2-B	Psychology . . . . .	2
AC 1	Accounting I . . . . .	3	AC 2	Accounting I . . . . .	3
		<u>12</u>			<u>12</u>
<i>Third Year</i>					
Ec 5	Economic Problems . . . . .	2	Ec 6	Economic Problems . . . . .	2
FI 5	Corporation Finance . . . . .	2	FI 6	Banking and Business . . . . .	2
IA 1	Industrial Management I . . . . .	2	IA 2	Industrial Management II . . . . .	2
MA 1	Marketing Principles . . . . .	3	MA 2	Marketing Problems . . . . .	3
AC 3	Accounting II . . . . .	3	AC 4	Accounting II . . . . .	3
		<u>12</u>			<u>12</u>
<i>Fourth Year</i>					
E 13	Effective Speaking . . . . .	1	E 14	Effective Speaking . . . . .	1
Ec 9	Statistics in Business . . . . .	2	Ec 10	Statistics in Business . . . . .	2
AC 5	Cost Accounting . . . . .	3	AC 6	Cost Accounting . . . . .	3
AC 7	Accounting Problems . . . . .	3	AC 8	Accounting Problems . . . . .	3
	Liberal Course . . . . .	3		Liberal Course . . . . .	3
		<u>12</u>			<u>12</u>
<i>Fifth Year</i>					
PA 5	Business and Gov't . . . . .	2	U 4	Business Policy . . . . .	2
E 5-B	Adv. Report Writing . . . . .	2	FI 12	Public Finance . . . . .	2
L 5	Legal Aspects I . . . . .	2	L 6	Legal Aspects II . . . . .	2
AC 9	Income Tax and Pub. Acct. . . . .	3½	AC 10	C.P.A. Problems . . . . .	3½
	Liberal Course . . . . .	2		Liberal Course . . . . .	2
C 11	Business Conference . . . . .	½	C 12	Business Conference . . . . .	½
		<u>12</u>			<u>12</u>

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of liberal character (see pages 95-103), making a total of 142 semester hours required for the S.B. degree. This work may be taken in the extra ten-week period at college during any upperclass year, or in two summer terms. There is no extra tuition charge for this additional program.



*II. Banking and Finance*

FIRST TERM			SECOND TERM		
No.	Course	Semester Hours	No.	Course	Semester Hours
<i>First Year</i>					
E 1-B	English.....	3	E 2-B	English.....	3
Gv 1	American Government	3	Gv 2	American Government	3
P 1-A	Surv. of Phys. Science	4	P 2-A	Surv. of Phys. Science	4
Ec 1	Economic Geography..	4	Ec 2	Comm. & Ind. Hist. of U. S.....	4
L 1	Legal Bases of Bus.....	3	L 2	Business Associations..	4
PE 1	Hygiene.....	1		Orientation.....	0
PE 3	Physical Training.....	0	PE 4	Physical Training.....	0
		<u>18</u>			<u>18</u>
<i>Second Year</i>					
E 3-B	Report Writing.....	2	E 4-B	Business Correspondence	2
Ec 3	Economic Principles...	2	Ec 4	Economic Principles...	2
FI 3	Business Finance.....	3	FI 4	Business Finance.....	3
Ps 1-B	Psychology.....	2	Ps 2-B	Psychology.....	2
AC 1	Accounting I.....	3	AC 2	Accounting I.....	3
		<u>12</u>			<u>12</u>
<i>Third Year</i>					
Ec 5	Economic Problems....	2	Ec 6	Economic Problems....	2
FI 5	Corporation Finance...	2	FI 6	Banking and Business..	2
IA 1	Indus. Management I...	2	IA 2	Indus. Management II..	2
MA 1	Marketing Principles...	3	MA 2	Marketing Problems...	3
AC 3	Accounting II.....	3	AC 4	Accounting II.....	3
		<u>12</u>			<u>12</u>
<i>Fourth Year</i>					
E 13	Effective Speaking.....	1	E 14	Effective Speaking.....	1
Ec 9	Statistics in Business...	2	Ec 10	Statistics in Business...	2
AC 7	Income Tax Accounting	3	FI 8	Adv. Banking Probs. ...	3
FI 9	Investments.....	3	FI 10	Investments.....	3
	Liberal Course.....	3		Liberal Course.....	3
		<u>12</u>			<u>12</u>
<i>Fifth Year</i>					
PA 5	Business and Gov't....	2	U 4	Business Policy.....	2
E 5-B	Adv. Report Writing...	2	FI 12	Public Finance.....	2
L 5	Legal Aspects I.....	2	L 6	Legal Aspects II.....	2
FI 13	R. E. Prac. & Appraising	3½	FI 14	Ins. Prins. & Practices.	3½
	Liberal Course.....	2		Liberal Course.....	2
C 11	Business Conference...	1½	C 12	Business Conference...	1½
		<u>12</u>			<u>12</u>

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of liberal character (see pages 95-103), making a total of 142 semester hours required for the S.B. degree. This work may be taken in the extra ten-week period at college during any upperclass year, or in two summer terms. There is no extra tuition charge for this additional program.

### III. Marketing and Advertising

FIRST TERM			SECOND TERM		
No.	Course	Semester Hours	No.	Course	Semester Hours
<i>First Year</i>					
E 1-B	English . . . . .	3	E 2-B	English . . . . .	3
Gv 1	American Government . . . . .	3	Gv 2	American Government . . . . .	3
P 1-A	Surv. of Phys. Science . . . . .	4	P 2-A	Surv. of Phys. Science . . . . .	4
Ec 1	Economic Geography . . . . .	4	Ec 2	Comm. & Ind. Hist. of U. S. . . . .	4
L 1	Legal Bases of Bus. . . . .	3	L 2	Business Associations . . . . .	4
PE 1	Hygiene . . . . .	1		Orientation . . . . .	0
PE 3	Physical Training . . . . .	0	PE 4	Physical Training . . . . .	0
		<u>18</u>			<u>18</u>
<i>Second Year</i>					
E 3-B	Report Writing . . . . .	2	E 4-B	Business Correspondence . . . . .	2
Ec 3	Economic Principles . . . . .	2	Ec 4	Economic Principles . . . . .	2
FI 3	Business Finance . . . . .	3	FI 4	Business Finance . . . . .	3
Ps 1-B	Psychology . . . . .	2	Ps 2-B	Psychology . . . . .	2
AC 1	Accounting I . . . . .	3	AC 2	Accounting I . . . . .	3
		<u>12</u>			<u>12</u>
<i>Third Year</i>					
Ec 5	Economic Problems . . . . .	2	Ec 6	Economic Problems . . . . .	2
FI 5	Corporation Finance . . . . .	2	FI 6	Banking & Business . . . . .	2
IA 1	Industrial Mgt. I . . . . .	2	IA 2	Industrial Mgt. II . . . . .	2
MA 1	Marketing Principles . . . . .	3	MA 2	Marketing Problems . . . . .	3
AC 3	Accounting II . . . . .	3	AC 4	Accounting II . . . . .	3
		<u>12</u>			<u>12</u>
<i>Fourth Year</i>					
E 13	Effective Speaking . . . . .	1	E 14	Effective Speaking . . . . .	1
Ec 9	Statistics in Business . . . . .	2	Ec 10	Statistics in Business . . . . .	2
MA 3	Sales Management . . . . .	3	MA 4	Sales Management . . . . .	3
MA 5	Advertising Principles . . . . .	3	MA 6	Advertising Problems . . . . .	3
	Liberal Course . . . . .	3		Liberal Course . . . . .	3
		<u>12</u>			<u>12</u>
<i>Fifth Year</i>					
PA 5	Business and Gov't. . . . .	2	U 4	Business Policy . . . . .	2
E 5-B	Adv. Report Writing . . . . .	2	FI 12	Public Finance . . . . .	2
L 5	Legal Aspects I . . . . .	2	L 6	Legal Aspects II . . . . .	2
MA 7	Retail Store Management . . . . .	3½	MA 8	Retail Merchandising . . . . .	3½
	Liberal Course . . . . .	2		Liberal Course . . . . .	2
C 11	Business Conference . . . . .	½	C 12	Business Conference . . . . .	½
		<u>12</u>			<u>12</u>

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of liberal character (see pages 95-103), making a total of 142 semester hours required for the S.B. degree. This work may be taken in the extra ten-week period at college during any upperclass year, or in two summer terms. There is no extra tuition charge for this additional program.

## IV. Industrial Administration

FIRST TERM			SECOND TERM		
No.	Course	Semester Hours	No.	Course	Semester Hours
<i>First Year</i>					
E 1-B	English . . . . .	3	E 2-B	English . . . . .	3
Gv 1	American Government . . . . .	3	Gv 2	American Government . . . . .	3
P 1-A	Surv. of Phys. Science . . . . .	4	P 2-A	Surv. of Phys. Science . . . . .	4
Ec 1	Economic Geography . . . . .	4	Ec 2	Comm. & Ind. Hist. of U. S. . . . .	4
L 1	Legal Bases of Bus. . . . .	3	L 2	Business Associations . . . . .	4
PE 1	Hygiene . . . . .	1		Orientation . . . . .	0
PE 3	Physical Training . . . . .	0	PE 4	Physical Training . . . . .	0
		<u>18</u>			<u>18</u>
<i>Second Year</i>					
E 3-B	Report Writing . . . . .	2	E 4-B	Business Correspondence . . . . .	2
Ec 3	Economic Principles . . . . .	2	Ec 4	Economic Principles . . . . .	2
FI 3	Business Finance . . . . .	3	FI 4	Business Finance . . . . .	3
Ps 1-B	Psychology . . . . .	2	Ps 2-B	Psychology . . . . .	2
AC 1	Accounting I . . . . .	3	AC 2	Accounting I . . . . .	3
		<u>12</u>			<u>12</u>
<i>Third Year</i>					
Ec 5	Economic Problems . . . . .	2	Ec 6	Economic Problems . . . . .	2
FI 5	Corporation Finance . . . . .	2	FI 6	Banking & Business . . . . .	2
IA 1	Industrial Mgt. I . . . . .	2	IA 2	Industrial Mgt. II . . . . .	2
MA 1	Marketing Principles . . . . .	3	MA 2	Marketing Problems . . . . .	3
AC 3	Accounting II . . . . .	3	AC 4	Accounting II . . . . .	3
		<u>12</u>			<u>12</u>
<i>Fourth Year</i>					
E 13	Effective Speaking . . . . .	1	E 14	Effective Speaking . . . . .	1
Ec 9	Statistics in Business . . . . .	2	Ec 10	Statistics in Business . . . . .	2
IA 3	Personnel Adminis. . . . .	3	IA 4	Personnel Problems . . . . .	3
AC 5	Cost Accounting . . . . .	3	AC 6	Cost Accounting . . . . .	3
	Liberal Course . . . . .	3		Liberal Course . . . . .	3
		<u>12</u>			<u>12</u>
<i>Fifth Year</i>					
PA 5	Business and Gov't. . . . .	2	U 4	Business Policy . . . . .	2
E 5-B	Adv. Report Writing . . . . .	2	FI 12	Public Finance . . . . .	2
L 5	Legal Aspects I . . . . .	2	L 6	Legal Aspects II . . . . .	2
IA 5	Motion & Time Study . . . . .	3½	IA 14	Industrial Finance . . . . .	3½
	Liberal Course . . . . .	2		Liberal Course . . . . .	2
C 11	Business Conference . . . . .	½	C 12	Business Conference . . . . .	½
		<u>12</u>			<u>12</u>

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of liberal character (see pages 95-103), making a total of 142 semester hours required for the S.B. degree. This work may be taken in the extra ten-week period at college during any upperclass year, or in two summer terms. There is no extra tuition charge for this additional program.

## V. Public Administration

FIRST TERM			SECOND TERM		
No.	Course	Semester Hours	No.	Course	Semester Hours
<i>First Year</i>					
E 1-B	English . . . . .	3	E 2-B	English . . . . .	3
Gv 1	American Government . . . . .	3	Gv 2	American Government . . . . .	3
P 1-A	Surv. of Phys. Science . . . . .	4	P 2-A	Surv. of Phys. Science . . . . .	4
Ec 1	Economic Geography . . . . .	4	Ec 2	Comm. & Ind. Hist. of U. S. . . . .	4
L 1	Legal Bases of Bus. . . . .	3	L 2	Business Associations . . . . .	4
PE 1	Hygiene . . . . .	1		Orientation . . . . .	0
PE 3	Physical Training . . . . .	0	PE 4	Physical Training . . . . .	0
		<u>18</u>			<u>18</u>
<i>Second Year</i>					
E 3-B	Report Writing . . . . .	2	E 4-B	Business Correspondence . . . . .	2
Ec 3	Economic Principles . . . . .	2	Ec 4	Economic Principles . . . . .	2
FI 3	Business Finance . . . . .	3	FI 4	Business Finance . . . . .	3
Ps 1-B	Psychology . . . . .	2	Ps 2-B	Psychology . . . . .	2
AC 1	Accounting I . . . . .	3	AC 2	Accounting I . . . . .	3
		<u>12</u>			<u>12</u>
<i>Third Year</i>					
Ec 5	Economic Problems . . . . .	2	Ec 6	Economic Problems . . . . .	2
FI 5	Corporation Finance . . . . .	2	FI 6	Banking and Business . . . . .	2
IA 1	Industrial Mgt. I . . . . .	2	IA 2	Industrial Mgt. II . . . . .	2
MA 1	Marketing Principles . . . . .	3	MA 2	Marketing Problems . . . . .	3
AC 3	Accounting II . . . . .	3	AC 4	Accounting II . . . . .	3
		<u>12</u>			<u>12</u>
<i>Fourth Year</i>					
E 13	Effective Speaking . . . . .	1	E 14	Effective Speaking . . . . .	1
Ec 9	Statistics in Business . . . . .	2	Ec 10	Statistics in Business . . . . .	2
IA 3	Personnel Adminis. . . . .	3	PA 2	Public Adminis. I . . . . .	3
Gv 5-B	Constitutional Law . . . . .	3	PA 4	Political Concepts . . . . .	3
	Liberal Course . . . . .	3		Liberal Course . . . . .	3
		<u>12</u>			<u>12</u>
<i>Fifth Year</i>					
PA 5	Business and Gov't. . . . .	2	U 4	Business Policy . . . . .	2
E 5-B	Adv. Report Writing . . . . .	2	FI 12	Public Finance . . . . .	2
L 5	Legal Aspects I . . . . .	2	L 6	Legal Aspects II . . . . .	2
PA 7	Public Adminis. II . . . . .	3½	PA 8	Public Adminis. III . . . . .	3½
	Liberal Course . . . . .	2		Liberal Course . . . . .	2
C 11	Business Conference . . . . .	½	C 12	Business Conference . . . . .	½
		<u>12</u>			<u>12</u>

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of liberal character (see pages 95-103), making a total of 142 semester hours required for the S.B. degree. This work may be taken in the extra ten-week period at college during any upperclass year, or in two summer terms. There is no extra tuition charge for this additional program.



## VI. Journalism

FIRST TERM			SECOND TERM		
No.	Course	Semester Hours	No.	Course	Semester Hours
<i>First Year</i>					
E 1-B	English . . . . .	3	E 2-B	English . . . . .	3
Gv 1	American Government . . . . .	3	Gv 2	American Government . . . . .	3
P 1-A	Surv. of Phys. Science . . . . .	4	P 2-A	Surv. of Phys. Science . . . . .	4
Ec 1	Economic Geography . . . . .	4	Ec 2	Comm. & Ind. Hist. of U. S. . . . .	4
L 1	Legal Bases of Bus. . . . .	3	L 2	Business Associations . . . . .	4
PE 1	Hygiene . . . . .	1		Orientation . . . . .	0
PE 3	Physical Training . . . . .	0	PE 4	Physical Training . . . . .	0
		<u>18</u>			<u>18</u>
<i>Second Year</i>					
E 3-B	Report Writing . . . . .	2	E 4-B	Business Correspondence . . . . .	2
Ec 3	Economic Principles . . . . .	2	Ec 4	Economic Principles . . . . .	2
FI 3	Business Finance . . . . .	3	FI 4	Business Finance . . . . .	3
Ps 1-B	Psychology . . . . .	2	Ps 2-B	Psychology . . . . .	2
AC 1	Accounting I . . . . .	3	AC 2	Accounting I . . . . .	3
		<u>12</u>			<u>12</u>
<i>Third Year</i>					
Ec 5	Economic Problems . . . . .	2	Ec 6	Economic Problems . . . . .	2
FI 5	Corporation Finance . . . . .	2	FI 6	Banking and Business . . . . .	2
IA 1	Industrial Mgt. I . . . . .	2	IA 2	Industrial Mgt. II . . . . .	2
MA 1	Marketing Principles . . . . .	3	MA 2	Marketing Problems . . . . .	3
AC 3	Accounting II . . . . .	3	AC 4	Accounting II . . . . .	3
		<u>12</u>			<u>12</u>
<i>Fourth Year</i>					
E 13	Effective Speaking . . . . .	1	E 14	Effective Speaking . . . . .	1
Ec 9	Statistics in Business . . . . .	2	Ec 10	Statistics in Business . . . . .	2
E 9	Journalism I . . . . .	3	E 10	Journalism I . . . . .	3
MA 5	Advertising Principles . . . . .	3	MA 6	Advertising Problems . . . . .	3
	Liberal Course . . . . .	3		Liberal Course . . . . .	3
		<u>12</u>			<u>12</u>
<i>Fifth Year</i>					
PA 5	Business and Gov't. . . . .	2	U 4	Business Policy . . . . .	2
E 5-B	Adv. Report Writing . . . . .	2	FI 12	Public Finance . . . . .	2
L 5	Legal Aspects I . . . . .	2	L 6	Legal Aspects II . . . . .	2
E 11	Journalism II . . . . .	3½	E 12	Journalism II . . . . .	3½
	Liberal Course . . . . .	2		Liberal Course . . . . .	2
C 11	Business Conference . . . . .	½	C 12	Business Conference . . . . .	½
		<u>12</u>			<u>12</u>

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of liberal character (see pages 95-103), making a total of 142 semester hours required for the S.B. degree. This work may be taken in the extra ten-week period at college during any upperclass year, or in two summer terms. There is no extra tuition charge for this additional program.

## *Synopses of Courses of Instruction\**

On the pages which follow are given the synopses of courses offered in the several curricula of the College. Courses offered in the first semester bear odd numbers; those offered in the second semester bear even numbers.

Freshmen courses extend over a full semester of 18 weeks. Upperclass courses are uniformly 10 weeks in length each term. The University reserves the right to withdraw any course in which there is insufficient enrolment.

### *Accounting*

#### *AC 1 Accounting I*

This course presents the fundamental principles of accounting theory and practice in a manner designed to meet the needs of students who intend to specialize in accounting as well as those who require a knowledge of accounting as a preparation for the study of banking and finance, production management, and marketing. Beginning with a consideration of the need for and the purpose served by accounting, a study of the balance sheet and operating statement is presented so that the ultimate goal and purpose of accounting is understood before the mechanical methods of recording business transactions are presented. The course then takes up specific balance sheet accounts; the law of debit and credit; the theory of nominal accounts; construction and interpretation of accounts; the recording process; the trial balance; construction of financial statements; the need for adjustments at the end of the period; depreciation; deferred and accrued items.

*3 semester hour credits*

#### *AC 2 Accounting I*

This course continues the work of the first semester with increased emphasis placed on accounting and interpretation of accounts. The main topics covered are closing of books, starting the new period, comparative statements, control accounts, and the operation of petty cash systems.

*3 semester hour credits*

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\*For definition of pre-requisite and preparatory courses, see page 104.

### AC 3 Accounting II

This course is a continuation of the fundamental principles of accounting. Greater emphasis is placed, however, on the accounting aspect of management. Special books, departmental accounts and statements, and accounting for manufacturing are specifically introduced. One of the main features of this course is the introduction of the analytical aspect of accounting.

*Pre-requisite: AC 2*

*3 semester hour credits*

### AC 4 Accounting II

The approach of AC 3 is continued with greater stress on the accounting rather than bookkeeping aspects. Continuity is aimed at throughout. Accounting for business organizations occupies the major part of the course. Formation and operation of partnerships and corporations are thoroughly covered. Special emphasis is placed on the valuation of partnership and corporation accounts. Problems dealing with branch accounting, installment sales, and bonds will also be studied in this course.

*Pre-requisite: AC 2*

*3 semester hour credits*

### AC 5 Cost Accounting

The structure of factory costs from the executive's viewpoint is studied in this course. The subject is approached chiefly from the management point of view. Problems are presented in a summarized form in order to stress the fundamental aspects of costs. Managerial control through the use of accounts is emphasized at the beginning of the course. Some of the specific topics covered are accumulation and distribution of cost data, process cost, job cost, historical cost, estimated cost, standard cost, and spoilage cost.

*Pre-requisite: AC 4*

*3 semester hour credits*

### AC 6 Cost Accounting

This course is designed to develop in the student the managerial ability to control production, operating, and distribution costs through the use of cost accounting and the budget. Methods of costing and controlling materials, labor, and expenses are considered in detail. Cost variations are analyzed. Joint cost and by-product cost are introduced.

*Pre-requisite: AC 4*

*3 semester hour credits*

### AC 7 *Accounting Problems*

The aim of this course is to develop the broad viewpoint, analytical power, and constructive and critical ability necessary to apply properly a knowledge of accounting principles to specific problems and situations. Consistency in the application of principles is stressed. The major portion of the course is devoted to the study of specific problems dealing with capital and revenue expenditures; depreciation, appraisals and reserves; branch accounting; and analysis of statements.

*Pre-requisite:* AC 4

*3 semester hour credits*

### AC 8 *Accounting Problems*

The method of approach in this course is like that followed in AC 7, with greater emphasis on the financial aspects of a business. Specific topics deal with bonds, annuities, sinking fund, reserves, investment accounting, application of funds, consignment sales, correction of statements, venture accounts, receivers accounts and insurance.

*Pre-requisite:* AC 4

*3 semester hour credits*

### AC 9 *Income Tax and Public Accounting*

The first part of this course covers the fundamental aspects of Federal Income Tax Law and the accounting concepts which arise from its interpretation. The latter part of the course contemplates the application of accounting knowledge to the analysis and interpretation of accounting records. Case material is used to outline the type of procedure best adapted to an intelligent examination of accounting records, and the compilation of reports on which the business manager can base plans for future operations. Specifically, balance sheet audits, detailed audits, and special investigations for credit and other purposes receive attention.

*Pre-requisite:* AC 4

*3½ semester hour credits*

### AC 10 *C.P.A. Problems*

The purpose of this course is to provide for the application of the knowledge of accounting principles and practice gained in the preceding courses to the analysis and solution of complex problems involving a recognition of the economic, legal, and social aspects of various forms of business organization. The course content consists chiefly of problems given in C.P.A. examinations. All phases of partnership, corporation, bond, depletion, cost accounting, consolidation, municipal accounting, bank accounting, adjustments of complex statements and reports, actuarial problems, and institutional accounting will be covered.

*Pre-requisite:* AC 4

*3½ semester hour credits*



## *Banking and Finance*

### *FI 3 Business Finance*

The fundamental principles of finance are approached in this course from the point of view of the business man. A study is made of the two basic ways of financing, namely, equity and borrowed funds, and their use in original and expansion financing. In addition, consideration is given to working capital requirements and the distinctions between short-term and long-term financing.

*3 semester hour credits*

### *FI 4 Business Finance*

A continuation of FI 3 Business Finance. This course deals with the application of the principles of finance to such problems as surplus, dividend and reserve policies, the relation of the corporation to banks and the investing public, and the problems of both trade and economic risk. The course includes an analysis of such combinations as trusts, holding companies, consolidations, and pools from both the public and financial points of view. Analysis is also made of aspects of reorganization problems in the light of present legislation. The course concludes with an analysis of government and state agencies now supplementing private sources of business funds.

*3 semester hour credits*

### *FI 5 Corporation Finance*

This course builds on the foundation of FI 3 and FI 4. The corporation, rather than business in general, is here considered. An analysis is made of the changing concepts in the corporation, such as separation of ownership and management, and the roles played by private initiative and private property. Through use of actual examples, a study is made of financial policies affecting sales, prices, markets, and control.

*2 semester hour credits*

### *FI 6 Banking and Business*

Because the student taking this course has already received through his study of economics some instruction in the general principles of money and credit, particular attention is given to the bank in its relation to the business man, and the function of the Federal Reserve System as a central banking agency. An analysis is made of the more basic aspects of Federal Reserve policy as they affect business and the banking community. Current problems are carefully considered.

*Pre-requisite: Ec 3*

*2 semester hour credits*

### *FI 8 Advanced Banking Problems*

In this course students are taught to look at the problems confronting the banker from the executive's point of view. Through a series of problems, most of which are actual cases, the matter of loan and investment policies will be studied at length with other problems concerning methods of increasing the bank's efficiency, volume of business, and profits receiving the proper amount of attention.

*3 semester hour credits*

### *FI 9 Investments*

This course consists of a review of the principles of investment, a study of investment policies, and the mechanics and mathematics of investments. It includes a basic study of the advantages and disadvantages of stocks and bonds as media of investment from a present and historical basis.

*3 semester hour credits*

### *FI 10 Investments*

A practical study is made of the various fields of investment such as industrials, rails, banks, real estate, government, and foreign investments. Emphasis is placed on security analysis as it pertains to the individual issues. The course not only concerns itself with an intensive study of particular companies and issues, but also includes an analysis of the various current methods of market analysis.

*3 semester hour credits*

### *FI 12 Public Finance*

One of the biggest problems confronting the people of all nations today is the question of taxation. In recognition of this fact and of the enormous difficulties facing business organizations and individuals because of the tax burden, the course in Public Finance is offered. This course teaches the kinds of taxes imposed by municipal, state, and federal governing bodies. Attention is given to the "trend" in taxation. Governmental borrowings and revenues are studied as to their general effect on the finances of individuals and business concerns. A large part of the time allowed for this course is spent in a study of the sources of revenue such as commodity taxes, highway taxes, general property taxes, taxes on business, poll taxes, income taxes, and death taxes.

*2 semester hour credits*

### *FI 13 Real Estate Practice and Appraising*

Consideration of land as an economic institution, and the importance of a sound land policy; the real estate man as a broker in landed property, his merchandising operations; the problems of owners and builders, the service to be rendered the ordinary purchaser; organization of the real estate office, renting, leasing, and property management; the importance of acquaintance with valuation principles; building operations, the financing of transactions, subdividing and planning; taxation, legal considerations, professional relationships.

*3½ semester hour credits*

### *FI 14 Insurance Principles and Practices*

The purpose of the course is to provide a comprehensive knowledge of insurance principles and coverage such as will provide a broad foundation for the student who plans to enter the business of insurance or enable the business man to plan a satisfactory program for personal needs or business responsibilities. Content: The basic principles of insurance, solving the economic problem of risk, types of insurance contracts, legal interpretation of the insurance contract, types of insurance companies, the needs of the buyer of insurance, co-operative organizations in the field of insurance.

*3½ semester hour credits*

## *Marketing and Advertising*

### *MA 1 Marketing Principles*

This course is designed to acquaint the student with the principles underlying the distribution of merchandise. Textbook assignments and lectures introduce a knowledge of the place of marketing in our modern economic order; the basic structure of markets; the main functions of marketing such as assembling, grading, storing, buying, selling and financing of goods; and the general classification of commodities into major types for the purpose of analytical study. The course gives further and more detailed consideration to the activities of the several types of middlemen such as brokers, wholesalers, and retailers, and their utilization as channels of distribution; the work of the commodity exchanges and co-operative marketing associations; and the development of chain stores, mail order houses, and department stores.

Other topics considered are market risk, pricing, selling terms and discounts, hedging, advertising, and the legal aspects of price



maintenance. Supplementary lectures and illustrative material will be given to explain in some detail the methods used in marketing several specific commodities.

*3 semester hour credits*

### MA 2 *Marketing Problems*

Using actual case material this course analyzes and suggests solutions to a wide variety of selling problems in typical industries and trades. It is aimed throughout to develop the analytical powers of the student so that he may decide a problem from the viewpoint of a marketing executive. Consideration is given to consumers' buying habits and buying motives, to the important types of retail and wholesale enterprise, and to an analysis of the channels of distribution with the object of formulating a basis for selecting suitable channels for various products. The marketing of industrial goods is studied including certain special problems such as hedging. Producer's co-operative marketing is also given attention.

*3 semester hour credits*

### MA 3 *Sales Management*

The study of actual case material forms the basis of this course. In each case the facts are analyzed and a solution proposed. The major problems of sales management may be stated as questions: What to sell? To whom shall products be sold? At what price and terms shall products be sold? The answering of these questions involves a consideration of merchandising policies and organization, market channels, market research and analysis, and pricing and credit policies.

*3 semester hour credits*

### MA 4 *Sales Management*

Continuing MA 3 Problems in Sales Management this course deals primarily with the following problems: sales methods, sales promotion, sales campaigns, management of sales force, and the planning and control of sales operations.

In the field of Sales Management the solution of problems involves two types of mental effort. First, there is the suggestion of plans or alternatives, a task requiring imagination; second, there is the choice between the alternatives so suggested, a matter of judgment. It is essential that the student of business management acquire the habit of weighing alternatives before deciding, but much more is to be gained if the student possesses and develops imagination.



The purpose of the courses in Sales Management is principally to develop an approach and technique for the solution of problems, so the student will be able to analyze and think through the problems which must be faced later when he arrives at a post of responsibility.

*3 semester hour credits*

### MA 5 *Advertising Principles*

The purpose of this course is to acquaint the student with the fundamental principles and facts which the advertising man must know today. The economic background of the subject and its development is presented, together with a survey of the methods for planning and preparing advertisements actually followed in advertising offices. Consideration is given to human instincts, buying habits, argumentative and suggestive appeals, color, headlines, layout, illustrations, and trademarks.

*3 semester hour credits*

### MA 6 *Advertising Problems*

The analysis and solution of a wide variety of advertising problems and cases based upon the actual business experience of a large number of firms constitutes the content of this course.

*3 semester hour credits*

### MA 7 *Retail Store Management*

The purpose of this course is to study the principles of successful retailing and to solve actual problems involving these principles. Layout, location and equipment of retail stores are first considered. Store organization, market contacts, buying, receiving and marking merchandise, and invoice procedure are taken up next. Mark-up and mark-down are dealt with in detail through practical examples requiring solution by the students, as are inventory and stock control methods. Merchandise planning is discussed and illustrated.

*3½ semester hour credits*

### MA 8 *Retail Merchandising*

This course continues the work of Retail Store Management, dealing with expense distribution, retail credits and collections, and with special phases of retail accounting. Other topics considered are: fashion, salesmanship, customer service, and the training and welfare of employees. The promotion of sales events and retail advertising practices are analyzed from the viewpoint of the store executive.

*3½ semester hour credits*

## *Industrial Administration*

### *IA 1 Industrial Management I*

The course in industrial management places emphasis on the administrative and profit-making phases of factory and plant operation. A textbook is used to present elementary principles and problem material which are supplemented by lectures.

The first part of the course presents a brief historical background of U. S. industry; this is followed by a treatment of the location of the plant; plant services and material handling; plant design, structure, and layout; standardization, simplification, and specialization.

*2 semester hour credits*

### *IA 2 Industrial Management II*

This course is a continuation of Industrial Management IA 1. It deals with the control of plant operations. Each department of a modern industrial concern is considered, emphasis being placed on the organization and management problems confronted and how they may be handled, with the intention that the student shall become familiar with the activities and general working of each department and the relationship which the departments hold to one another and to the business as a whole. In detail are considered: budgeting, standards of performance (time and motion study, wage systems), organization, routing, scheduling, dispatching, inventory control, quality control, and visual controls such as the organization chart, planning board, and departmental report.

*2 semester hour credits*

### *IA 3 Personnel Administration*

A consideration of what modern industry is doing in making an application of science to the obtaining and retaining of an effective and co-operative working force. The student studies thoroughly personnel administration systems now in use including the preparation and use of many forms among which are the occupational description, application, and interview blanks, promotion charts, wage scale, personnel control charts, etc. In addition, such subjects as wage payment plans, profit sharing, the training of workmen, workers' security plans, employee representation, collective bargaining, and management relationships are given attention.

Provisions of the National Labor Relations Act and the Wages and Hours Act are discussed.

*3 semester hour credits*

### *IA 4 Personnel Problems*

This course brings to the attention of the student an understanding of the related, yet varied, problems with which the modern personnel department is confronted. These include problems of guidance, placement, job evaluation, adjustment of rates, employee rating systems, development of complete, yet simple, personnel records, etc.

*3 semester hour credits*

### *IA 5 Motion and Time Study*

This course comprises a detailed study of time and motion study work, a complete study and actual practice in micromotion which is the use of motion pictures in the motion study work, a preparation of simo-charts (the use of colored charts and symbols called Therbligs which show all the elements in an operation cycle), and the making of process charts which is the use of specifically designed symbols, or industrial shorthand, to record motion analysis.

*3½ semester hour credits*

### *IA 14 Industrial Finance*

The early part of this course consists of a study of internal management problems and methods of determining profit trends through use of profit and capital graphs. The latter half of the course is given to a brief survey of the existing forms of finance with particular emphasis upon external trends that affect seriously the problems of corporate management.

*3½ semester hour credits*

## *Public Administration*

### *PA 2 Public Administration I*

A study of career service of the local, state, and national government; the administrative positions in career service; the information needed by the government administrator in order to function effectively; and the means for acquiring public administration knowledge.

*3 semester hour credits*

### *PA 4 Political Concepts*

A critical study is made of the major developments in political theory since Bentham with special reference to the influence of

these developments upon American politics and political institutions. Attention is paid to the modern conflict between the democratic and the totalitarian conceptions of the state.

*3 semester hour credits*

### *PA 5 Business and Government*

The object of this course is to develop a thorough understanding of the relationships between government and business. The attitude of our government toward business since 1885 as evidenced by legislative, judicial, and executive action will be analyzed in detail. Careful attention will be given the experience under the NRA and the attempts on the part of government and business to preserve the good features of the codes. Special consideration will be given to the part played by the administrative agency.

*2 semester hour credits*

### *PA 7 Public Administration II*

A study of the subject matter and principles of management necessary for the efficient operation of the government.

*3½ semester hour credits*

### *PA 8 Public Administration III*

This course presents a study of the public relations, fiscal control, and policy making aspects of public administration, stressing the importance of co-operation among government bureaus, legislative bodies, and the public; and presents to the student an appreciation of the importance of versatility of ability for a successful public career.

*3½ semester hour credits*

## *Journalism*

### *E 9 Journalism I*

The newspaper technique, with practice in rewriting; the general tasks of an "inside" man and the functions of the editorial department.

*3 semester hour credits*

### *E 10 Journalism I*

The problems of reporting and newswriting, with written assignments in all types of spot news reporting.

*3 semester hour credits*



### *E 11 Journalism II*

Editing the news. The writing of editorials, feature articles, and columns.

*3½ semester hour credits*

### *E 12 Journalism II*

A general practice course in newspaper writing, the covering of special assignments, and editorial problems.

*3½ semester hour credits*

## *Business Law*

### *L 1 Legal Bases of Business*

A survey course presenting the fundamental principles of business law and their relationships to the operations of business enterprise. Since practically every phase of business activity from the organization to the dissolution of a concern rests on a foundation of law, it is essential that the student of business understand the rudimentary legal principles involved. Major topics covered include contracts, agency, negotiable instruments, sales, bailments, carriers, insurance law, suretyship, and bankruptcy.

*3 semester hour credits*

### *L 2 Business Associations*

This course deals with the legal, economic, and human phases of business organizations. It discusses the individual proprietorship, partnership, corporation, and business trust, showing how each is formed, operated, and dissolved. The merits, as well as the shortcomings, of each form are treated. Specific problems will deal with the legal requirements, organization expense, operating problems, taxes, and reports required of each of these types of organizations.

*4 semester hour credits*

### *L 5 Legal Aspects I*

This course covers the law of contracts and the law of agency as they affect the business man. Under the law of contracts such subjects are considered as agreements, competent parties, consideration legality, assignment, discharge of contracts, enforcement of contracts, and damages for breach. Under the law of agency there is discussion of the formation of the agency relationship, rights, and duties of the principal and the agent, rights of third parties and termination of agency.

*2 semester hour credits*

## *L 6 Legal Aspects II*

This course deals chiefly with the subject of negotiable instruments. The widespread use of credit instruments in commercial transactions demands a knowledge of the law of bills and notes on the part of the business man. The various types of instruments are first discussed, the requirements for negotiability, the negotiation by endorsements of various kinds, the rights of holders in due course, the rights and liabilities of other parties, the requisites for charging secondary parties, and methods of discharge. Consideration is given the law of sales, including such topics as the passing of title to goods, conditions and warranties, the Statute of Frauds, rights and remedies of buyers and sellers.

*2 semester hour credits*

## *Co-ordination*

### *C 11 Business Conference*

This course is designed to bring about analytical thinking and systematic planning of the "after-graduation-employment" problem. It is conducted as an open discussion class by the Department of Co-operative Work. Each Co-ordinator has in class those students who have been placed and supervised on co-operative work by him. Each student analyzes and applies to himself as the "product" the fundamental principles of merchandising. Prominent men who are leaders in the fields of employment counseling, business, or engineering present the employers' viewpoint. Thus the graduating seniors are brought face to face during the year with one of the most important and perplexing problems of life, namely, how to "sell their services", thereby aiming to bring a co-ordinated training of theory and practice to a logical conclusion.

*½ semester hour credit*

### *C 12 Business Conference*

This course is the sequel to C 11 and consists of the practical application of the techniques of job-getting which have been analyzed and discussed in that course. It is conducted on a conference rather than on a class basis, the major portion of the time being devoted to the planning and writing of letters to and securing interviews with prospective employers. It is intended that this course will culminate in the attainment by each student of his after-graduation job.

*½ semester hour credit*

## English

### *E 1-B English*

A course in composition with emphasis on the basic principles of writing. A brief, comprehensive review of grammar and rhetoric precedes the study of exposition. Works of contemporary essayists and biographers are used as models for weekly themes and studied as examples of modern literature.

*3 semester hour credits*

### *E 2-B English*

A continuation of E 1-B, with a study of contemporary short stories, plays, and poems. Toward the end of the term a careful study of letter writing is made.

*3 semester hour credits*

### *E 3-B Report Writing*

In recognition of the importance to business men of clear and concise written expression in daily business contacts, this course places emphasis on up-to-date business practices. Actual reports used in industry are presented for class study and criticism. The report form, the use of illustrations, exhibits, and charts, the purposes and qualities of a good report are derived from an examination of current models. In addition, the course considers such forms of business writing as the memorandum, instruction data, the company magazine and bulletin, minutes of meetings, recommendations and suggestions, and manuals of company practice and procedure.

*2 semester hour credits*

### *E 4-B Business Correspondence*

Too great an importance cannot be attached to effective and correct business letters as essential to the successful conduct of any business. This course gives consideration of the basic principles of business letter writing with particular reference to the form of the letter, the letter writer's point of view, natural language, dictation. Routine business letters — inquiry, order, complaint, adjustment, credit, collection letters, and letters of application — will be analyzed and discussed. The problems of selling by mail will be briefly examined.

*2 semester hour credits*

### *E 5-B Advanced Report Writing*

An advanced study of current practices in industrial report writing will be the purpose of this course. The emphasis will be placed equally upon matter and form so that professional proficiencies may be correlated with effective presentation.

*2 semester hour credits*

### *E 13 Effective Speaking*

This course offers practical training in the preparation and presentation of the various types of speeches. The instruction is planned to eliminate defects of voice, posture, and delivery, and to develop in the student an ability to speak easily, naturally, and forcefully.

*1 semester hour credit*

### *E 14 Effective Speaking*

Continued practice in impromptu and extempore speaking, organization of material, consideration of the audience, and vocabulary building form the basis of the course.

*1 semester hour credit*

## *Economics*

### *Ec 1 Economic Geography*

In order to provide an adequate background for the study of economics this first course emphasizes the economic resources of our country and the part played by these resources in the development of our modern industrial society. The course is more concerned with promoting the comprehension of basic concepts than with stressing encyclopedic knowledge of masses of details. In the latter part of the semester frequent use is made of motion pictures to illustrate the processes and peculiar economic characteristics of specific industries.

*4 semester hour credits*

### *Ec 2 Commercial and Industrial History of the U. S.*

This course is designed to complete the factual background which is needed for the most successful study of theoretical economics. The economic development of the United States is traced from the colonial period to the present with special emphasis upon the period since the Civil War. Stress is laid upon the importance of economic factors and changes in our history in the description of



the development of manufacturing, agriculture, domestic and foreign commerce, finance and banking, transportation and labor organizations. Consideration is given to European developments which have been closely related to those of the United States.

*4 semester hour credits*

### *Ec 3 Economic Principles*

A thorough grounding in the fundamental principles and laws of economics is the aim of this basic course. The main topics include: the nature and organization of production, the nature and importance of wants, the relation of money and prices, the process of exchange, and the nature of international trade.

*2 semester hour credits*

### *Ec 4 Economic Principles*

A continuation of Ec 3. A careful analysis is made of the determination of price under conditions of competition and monopoly, and of the distribution of wealth and income in the form of wages, economic rent, interest, and profits. The elements of insurance are discussed in connection with profits.

*2 semester hour credits*

### *Ec 5 Economic Problems*

In this course the application of economic principles to some of the major economic problems of modern society is emphasized. The problems studied include consumption, protective tariffs and subsidies, labor problems such as unemployment and labor unions, and the business cycle.

*2 semester hour credits*

### *Ec 6 Economic Problems*

A continuation of Ec 5 Economic Problems. Among the problems considered are the following: price stabilization, the agricultural problem, the relation of government to business including the control of monopolies and public utilities, insurance, public finance, and proposals for the remodeling and improving of the economic system.

*2 semester hour credits*

### *Ec 9 Statistics in Business*

This course is intended to give the student an understanding of statistical principles and methods and their practical application in the administration of modern business. A study is made of

the nature, sources, collection and organization of business facts; the presentation of such facts in tabular or graphic form, the various averages, measures of dispersion, and the construction and use of index numbers. Laboratory periods provide an opportunity for each student to demonstrate his ability to apply the principles studied.

*2 semester hour credits*

### *Ec 10 Statistics in Business*

The major portion of this continuation of Ec 9 Statistics in Business concerns the analysis of time series and includes the methods of obtaining trends, seasonal indexes, and the measurement of cyclical variation. Correlation of time series is related to the problems of business forecasting. In the laboratory work each student is required to make a complete analysis of an individual time series, preferably associated with his co-operative work.

*2 semester hour credits*

## *Government*

### *Gv 1 American Government*

The study of our National Government with respect to its organization and function; its powers and limitations under the Constitution; its legislative, administrative and judicial machinery under the party system of government and bureaucracy.

*3 semester hour credits*

### *Gv 2 American Government*

A more careful study of the relationships of our federal, state, and municipal governments, including an analysis and comparison of the various state governments and types of municipal government with respect to state and local agencies for carrying out the executive, legislative and judicial functions of government in a democratic country.

*3 semester hour credits*

### *Gv 5-B Constitutional Law*

A careful study of the leading constitutional principles of the American government as developed through judicial interpretation. Primary emphasis is placed upon the relation of constitutional law to present day problems with particular reference to such items as "due process of law" and "interstate commerce".

*3 semester hour credits*

## Psychology

### *Ps 1-B Psychology*

An elementary survey of the psychology of individual differences including personality differences, together with a presentation of some of the practical applications of the findings of differential psychology.

*2 semester hour credits*

### *Ps 2-B Psychology*

An introduction to general experimental psychology. The topics considered include learning, thought, memory, perception, and sensation.

*2 semester hour credits*

## Other Required Courses

### *P 1-A Survey of Physical Science*

The purpose of the course is to give a definite conception of the physical world to those students who ordinarily would not elect a science course but who need to know something about the contributions and the place of the physical sciences in contemporary civilization. This course begins with a study of the universe and solar system. Consideration is given to the principles of distance, mass and weight, and the simple dynamics of bodies. The earth is studied from the viewpoint of its geological, meteorological, and chemical aspects, these main fields introducing a non-mathematical discussion of magnetism, heat, and electricity.

*4 semester hour credits*

### *P 2-A Survey of Physical Science*

In this course, which continues P 1-A, the phenomena of light are taken up. Following this, consideration is given to spectroscopy and matter structure, the periodic table, acids, bases, salts, and organic compounds. The course concludes with a discussion of certain aspects of physics which are of practical importance in the household, such as heating, lighting, refrigeration, and electrical appliances.

*4 semester hour credits*

### *PE 1 Hygiene*

One class hour a week is devoted to the study of information closely related to the physical training work and to personal and mental hygiene. For each class lecture the student is assigned at least one hour of outside study based on the required textbook. The course includes enough of the fundamentals of physiology and anatomy to enable the student to understand such parts of the course as require some knowledge of these subjects.

*1 semester hour credit*

### *U 4 Business Policy*

This course is set up as a seminar in which the members of the class will examine the problems that the business man faces daily in his relations with government, labor, the market, and the community. The ethical features of business policy formation will be stressed along with the social implications. An attempt will be made to determine the criteria by which fair business practices can be distinguished from unfair.

*2 semester hour credits*

### *Orientation*

This course, required of all first year students, is designed to make the entering student explicitly aware of those facts, principles, and techniques which are significantly related to the maintenance of his intellectual efficiency, to assist him in making desirable social adjustments in the college community, to help him make a wise choice in his upperclass field of specialization. Special effort is made to prepare the student to make an early and satisfactory adjustment to the conditions of the co-operative work. Lectures and individual conferences.

*No credit*

### *Physical Training*

All first-year students are required to take physical training. Health, strength, and vitality do not come by chance, but by constant attention to those factors involved in their development. It is very essential for the student to acquire good habits of life.

The work in the course includes a formal calisthenic program, special exercise classes for the correction of postural defects, participation in the regular athletic program, including baseball, basketball, hockey, track, and many types of informal games. All members of the class are also required to learn to swim.

Students wishing to be excused from physical training, because of physical defects, are required to present a petition to the faculty supported by a physician's certificate.

*No credit*



### *Business Administration Theses*

A thesis in the College of Business Administration is considered to be an essay involving the statement, analysis, and solution of some problem in a special field of business administration. Its purpose is to demonstrate a satisfactory degree of initiative and power of original thought and work on the part of the candidate. A mere resume of existing knowledge in some subject is not acceptable. This, it is true, must usually be made, but in addition thereto the student must show his ability to deal constructively with the data he has collected and his power to draw significant and reliable conclusions from his investigations. The completed thesis will be examined for acceptance or rejection from the technical viewpoint by the Departments interested and then forwarded to the Secretary of the Faculty. Final approval of the thesis rests with the Dean. When it is accepted, the thesis becomes the property of the school and it is not to be printed, published, nor in any other way made public except in such manner as the Department and the Dean shall jointly approve.

Theses are not required of seniors in the College of Business Administration. To certain students who wish to do so, however, the privilege of writing a thesis may be granted by the Dean in accordance with the following regulations:

1. To be eligible to write a thesis a student must have attained a scholastic average of at least 2.0 or better during his middler year and the first half of his junior year.
2. Students who have met this minimum requirement may petition the Dean for the privilege of substituting a thesis for any one of the required courses of the fifth year.
3. In his petition the student must state the subject which he proposes to investigate and give a brief statement of the purpose and scope of the proposed thesis.
4. Petitions for the privilege of writing theses must be submitted in writing to the Dean not later than the middle of the second college period of the junior year.

### *Liberal Electives*

In addition to the prescribed courses in each curriculum, students may elect one liberal arts course in each of the last two years. These liberal electives may be chosen from courses offered by the College of Liberal Arts as listed hereafter, provided they are scheduled at a time when the students are free to take them.

### *B 50 General Biology*

This is a comprehensive course in biology dealing with animals and plants and their relation to their environment. The fundamental phenomena of living things are stressed. General biological laws and theories are discussed.

Laboratory work illustrates the lectures.

*4 semester hour credits*

### *By 50 Men of Science*

The intent of this course is to acquaint the students in the several professional departments of engineering with the lives and personalities of those men who were responsible for the important fundamental principles and discoveries upon which their special branches of engineering are based, and by means of which they have been developed. It is not intended to discuss their scientific work, but rather to make them living and real characters so far as possible so that the students will appreciate them as fellow men instead of mere vague names attached to some law or principle.

*2 semester hour credits*

### *Ec 8 Business Cycles*

After a study of the conditions which underlie cyclical fluctuations in prices, volume of trade, physical production, and employment, a careful analysis is made of the more significant theories of the business cycle. The possibilities of controlling such fluctuations and of initiating recovery receive extended attention. Throughout the course emphasis is placed upon the current phase of the business cycle and its peculiar problems.

*Preparation: Ec 5, Ec 6*

*2 semester hour credits*

### *Ec 11 Labor Problems*

An intensive study of the labor problems of modern industry constitutes the content of this course. Unemployment and other grievances of the worker, including industrial accident and disease, inadequate wages, long hours, undesirable working conditions, child and woman labor, etc., are carefully analyzed. Labor unions, representing the workers' effort to solve the above problems, receive extended attention with an appraisal of their policies and accomplishments. Employee representation, profit-sharing plans and similar devices of the employer to meet the same problems are also examined critically. The attitude of our government toward these problems and its attempts to handle them are analyzed carefully. The suggestions of other groups and agencies in respect to these problems will be treated, e.g., co-operative movement, socialism.

*3 semester hour credits*

### *Ec 12 Economic Systems*

This is an intensive analysis of alternative economic systems. Various criteria for evaluating the different systems are developed.

*Pre-requisite: Ec 3, Ec 4*

*2 semester hour credits*

### *Ec 14 International Economic Relations*

A careful examination of the important principles of international trade and finance precedes a critical survey of the international commercial policies of modern nations, with special reference to the United States. Such broader problems as the international control of raw materials, exchange restrictions, international cartels and the economic activities of the League of Nations and other international organizations are considered.

*Preparation: Ec 5, Ec 6*

*3 semester hour credits*

### *Ec 15 History of Economic Thought*

A critical review of the origin and development of economic thought from the ancient world to modern times is the aim of this course, since familiarity with the efforts of great economic thinkers in the past is essential for the thorough understanding of modern economic theory. After briefly noting the contributions of Plato and Aristotle, the early Christian fathers, and the writers of the Middle Ages, each of the main schools of economic thought is taken up in turn: the Mercantilists, the Physiocrats, the Classical School, the Socialists, the Historical School, the Austrian School, and Alfred Marshall.

*Preparation: Ec 5, Ec 6*

*2 semester hour credits*

### *Ec 16 Advanced Economic Theory*

The course introduces the student to the more complex aspects of economic theory. Particular consideration is given to the major modern theoretical problems.

*Preparation: Ec 15*

*2 semester hour credits*

### *E 15 Survey of English Literature*

A survey of English literature to 1800. After a brief study of the social and political background of each literary period, the writing of the period is considered, and the more important writers are studied and read in detail. The purpose of the course is to give the student an appreciation of English literature as a whole, and an intimate knowledge of its major figures.

*3 semester hour credits*

### *E 16 Survey of English Literature*

A survey of English literature from 1800 to the present century. The outstanding writers are read, studied, and related to the general background of nineteenth-century England. The purpose of the course is to give the student an understanding of the writers who contributed most to the formation and development of modern literature in England.

*3 semester hour credits*

### *E 19 Shakespeare*

An introduction to the work of Shakespeare. The Elizabethan period, Shakespeare's London, the Elizabethan stage and audience, and the plays of Shakespeare's contemporaries will be discussed in lectures. Five plays will be studied.

*2 semester hour credits*

### *E 20 Shakespeare*

Lectures will be given on Shakespearean grammar, the text of Shakespeare, editors' problems, etc. Four plays will be carefully analyzed.

*2 semester hour credits*

### *E 25 American Literature to 1860*

A survey of American literature from colonial times to the triumph of the transcendental movement in New England. The work of Bryant, Irving, Cooper, Poe, Emerson, Thoreau, Lowell, Holmes, Longfellow, and Melville will be emphasized.

*2 semester hour credits*

### *E 26 American Literature After 1860*

Continuing E 25, the course will consider the rise of realism after the Civil War, the development of American humor, the appearance of local color writers, and modern trends since 1900.

*2 semester hour credits*

### *E 51 The Short Story*

This course is intended to give the student training and practice in the reading of the short story. It includes a brief account of the origin and development of the short story as a fictional form, and the study of the technique of character portrayal, plot construction, setting, and theme. Short stories are assigned for reading and analysis.

*2 semester hour credits*



### *E 52 The American Novel*

This course traces the appearance of the American novel from about 1790 to the present. It includes a discussion of the influence of the English novel on early American writers, the exploitation of patriotic tradition and the American scene, frontier romance, "local color" literature, experiments in naturalism, and modern techniques. Four novels will be assigned for reading.

*2 semester hour credits*

### *Gv 3 Comparative Government*

The older governments of Europe, those principally of Great Britain and France, but also of Switzerland and the Scandinavian countries, are described and analyzed in this course. Institutions are compared in these various states with reference to America and the newer governments of Europe.

*2 semester hour credits*

### *Gv 4 Comparative Government*

A study of the newer governments of Europe, as found in Germany, Italy, and the Soviet Union. Democracy and dictatorship are analyzed as different modes of life and rule. These states are compared to each other, to the older governments of Europe, and to the United States.

*2 semester hour credits*

### *Gv 5 American Constitutional Law*

Following a careful study of the influences affecting the framing of the Constitution, attention is turned to the leading constitutional principles of the American government as developed through judicial interpretation.

*2 semester hour credits*

### *Gv 6 American Constitutional Law*

A continuation of Gv 5. Primary emphasis is placed upon the relation of constitutional law to present day problems with particular reference to such items as "due process of law" and "inter-state commerce".

*Preparation: Gv 5*

*2 semester hour credits*

### *Gv 7 Origins of Political Theory*

A survey of political philosophy from Plato and Aristotle to Bentham. The nature, origin, forms, and ends of the state and government are covered.

*2 semester hour credits*

### *Gv 8 Modern Political Theory*

A critical study is made of the major developments in political theory since Bentham with special reference to the influence of these developments upon American politics and political institutions. Attention is paid to the modern conflict between the democratic and the totalitarian conceptions of the state.

*2 semester hour credits*

### *Gy 50 Geology*

This is a study of earth movements and the various terrestrial applications of solar energy. The more important geological processes — erosion, sedimentation, deformation, and eruption — are taken up and discussed. The course includes lectures on the broader structural features of the earth's crust and the application of the principles of structural geology to practical engineering problems.

*2 semester hour credits*

### *H 5 Europe, 1789–1870*

This course aims at describing and interpreting the development of European states from the French Revolution to 1870. Major topics include the Metternich system, the emergence of French Republicanism, and the unification of Italy and Germany. Non-political factors receive much attention throughout the course.

*2 semester hour credits*

### *H 6 Europe, 1870–1938*

The international relationships which precipitated the tragedy of 1914 are considered. The rise of militarism and nationalism, secret diplomacy, propaganda and the press, the "incidents" which led to the World War, the conduct of the war, the peace treaties, and the rise of socialism and fascism are discussed in this course.

*2 semester hour credits*

### *H 9 The United States to 1865*

This course is an interpretation of the events which shaped the American nation to the Civil War. Social customs, economic influences, racial contributions, and humanitarian movements are not neglected even though the political history is stressed.

*2 semester hour credits*

### *H 10 The United States Since 1865*

Major attention is given to the social, economic, and political foundations of recent history in this survey of the transition of America from an agricultural to an urban industrialized society since the Civil War. Consideration is given to the problems arising with the emergence of America as a world power.

*2 semester hour credits*

### *Ph 50 Philosophy*

After surveying the nature, purpose, and value of philosophy, this course considers such basic principles as the following: concepts of reality; the nature of space, time, and relativity; theories of knowledge; the nature of mind; and the meaning of existence. The course is designed to train the student to think philosophically, as well as to acquaint him with data in the field.

*2 semester hour credits*

### *Ps 7 Social Psychology of Everyday Life*

A course devoted to the psychological examination of some of the phenomena observable in everyday social life. These include customs, crazes, fashions, rumor, propaganda, crowds, leadership, competition, and co-operation.

*Preparation: Ps 2*

*2 semester hour credits*

### *Ps 8 Social Psychology, Theory, and Methods*

A survey of the field of social psychological theory and an examination of the experimental technique utilized in this field of psychology. Special emphasis is placed upon attitudes and their measurement.

*Preparation: Ps 7*

*2 semester hour credits*

### *S 3 Social Problems*

Attention is given the nature, complex causation, and inter-relatedness of social problems in general. Cultural change with its attendant lags, as well as other social forces and conflicts, are studied. While sociological theory is occasionally introduced to clarify the problem at hand, the course is essentially practical in character. Such problems as poverty and unemployment, race antagonisms, population pressures, and the broken home are considered. Optional field trips to various institutions give concreteness to the problems studied.

*Preparation: S 1, S 2*

*2 semester hour credits*

### *S 4 Social Pathology*

Similar to the course in Social Problems in background and approach, this study deals with the maladjustments and ills of human society. Emphasis is given those pathological conditions which exist in relations between the individual and the group.

*2 semester hour credits*

Typical subjects presented include mental defectiveness and disease, alcoholism and drug addiction, suicide, delinquency and crime, and pathologies of domestic relations. The field trips arranged for this course add to the practical knowledge of the social ills which are studied.

*Preparation: S 1, S 2*

*2 semester hour credits*

### *S 7 Principles of Social Ethics*

To understand more clearly the meaning of morality in social relations is the aim of this study. Right and wrong conduct is analyzed in the light of the highest values for human society. Moral laws are discussed, and the various systems of ethics are evaluated. Scientific attitudes are encouraged in order that one's moral judgments be compatible with one's best reflective thought.

*Preparation: S 1, S 2*

*2 semester hour credits*

### *S 8 Problems in Social Ethics*

Problems arising from differences in moral standards found in the various social groups will be examined. The question of ethical relativism and determinism will be considered. A selected number of specific problems in social ethics will be discussed.

*Preparation: S 7*

*2 semester hour credits*

### *S 50 The Family*

With emphasis on the practical, this course will deal with the development of the modern family as a basic sociological institution. Problems confronting marriage and the family will be discussed and solutions proposed. A number of special lecturers will be brought into the course. Optional field trips will be offered.

*2 semester hour credits*

### *Sp 1 Elementary Spanish*

A beginner's course stressing the essentials of grammar, practice in pronunciation, and progressive acquisition of basic vocabulary and current idiomatic expressions.

*3 semester hour credits*



### *Sp 2 Elementary Spanish*

A continuation of Sp 1. Most of the time is devoted to the reading of simple texts, with oral practice based on the material read.

*Preparation: Sp 1*

*3 semester hour credits*

### *Sp 3 Intermediate Spanish*

In this course several texts of average difficulty are read and studied. The work includes a thorough review of grammar, oral practice, based on the reading matter, memorizing of selected passages, dictation, study of idioms, vocabulary building, and outside reading.

*Preparation: Sp 2*

*3 semester hour credits*

### *Sp 4 Intermediate Spanish*

A continuation of Sp 3, with an increasing amount of both class and outside reading.

*Preparation: Sp 3*

*3 semester hour credits*

# NORTHEASTERN UNIVERSITY

## Courses of Instruction Offered in the Day Colleges

Certain of the courses here listed are offered only in alternate years, and the University reserves the right to withdraw any course in which there is insufficient enrollment.

Courses not included in the prescribed curricula (pages 70 to 75) may be taken only after approval by the student's faculty adviser. Except where otherwise indicated, electives are not open to freshmen.

Pre-requisite courses are divided into two groups. Those courses printed in regular type (AC2) must have been completed with passing grades before a student will be permitted to register for the advanced courses to which they apply. Those courses printed in italics (B3) are of such a preparatory nature that a student undertaking an advanced course without having had the preparatory courses specified, will ordinarily find himself greatly handicapped, and he may not register in the advanced course without the consent of the instructor.

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College*	Curriculum	Yr.
<i>Accounting</i>								
AC1	Accounting I		3	3	2	BA	All	2
AC2	Accounting I		3	3	2	BA	All	2
AC3	Accounting II	AC2	3	3	2	BA	All	3
AC4	Accounting II	AC2	3	3	2	BA	All	3
AC5	Cost Accounting	AC4	3	2	2	BA	I & IV	4
AC6	Cost Accounting	AC4	3	2	2	BA	I & IV	4
AC7	Accounting Problems	AC4	3	4	0	BA	I & II	4
AC8	Accounting Problems	AC4	3	4	0	BA	I	4
AC9	Income Tax and Public Accounting	AC4	3½	4	0	BA	I	5
AC10	C.P.A. Problems	AC4	3½	4	0	BA	I	5
<i>Biology</i>								
B1-A	General Biology		4	4	3	LA	Elective	1
B1	General Zoology		3	2	2	LA	Biology	2
B2	General Botany		3	2	2	LA	Biology	2
B3	Invertebrate Zoology	B1	2	2	3	LA	Biology	3
B4	Invertebrate Zoology	B3	2	2	3	LA	Biology	3
B5	Vertebrate Zoology	B1	2	2	3	LA	Biology	3
B6	Vertebrate Zoology	B5	2	2	3	LA	Biology	3
B7	Animal Physiology	B6	2	3	0	LA	Biology	
B8	Animal Physiology	B7	2	3	0	LA	Biology	
B9	Principles of Genetics	B1,2	2	3	0	LA	Biology	
B10	Principles of Genetics	B9	2	3	0	LA	Biology	
B11	Animal Histology	B6	2	2	2	LA	Biology	
B12	Animal Histology	B11	2	2	2	LA	Biology	
B13	Vertebrate Embryology	B6	2	2	2	LA	Biology	
B14	Vertebrate Embryology	B13	2	2	2	LA	Biology	
B15	Parasitology	B6	2	2	2	LA	Biology	
B16	Parasitology	B15	2	2	2	LA	Biology	
B17	Mammalian Anatomy	B6	2	1	6	LA	Biology	
B18	Mammalian Anatomy	B17	2	1	6	LA	Biology	

\*NOTE: BA = College of Business Administration.

LA = College of Liberal Arts.

Eng = College of Engineering.

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Biology — Continued</i>								
B19	Histological Technique	B11	2	1	6	LA	Biology	
B20	Histological Technique	B19	2	1	6	LA	Biology	
B21	History of Biology		2	3	0	LA	Biology	
B22	History of Biology		2	3	0	LA	Biology	
B50	General Biology		4	4	3	Eng,BA	Elective	
B61	Seminar		2	3	0	LA	Biology	
B62	Seminar	B61	2	3	0	LA	Biology	
B65	Thesis		3			LA	Biology	
B66	Thesis		3			LA	Biology	
<i>Biography</i>								
By50	Men of Science		2	3	0	Eng,BA	Elective	
<i>Co-ordination</i>								
C1	Vocational Conference		1½	2	0	LA	All	5
C2	Vocational Conference		1½	2	0	LA	All	5
C7	Engineering Conference		1½	2	0	Eng	All	5
C8	Engineering Conference		1½	2	0	Eng	All	5
C11	Business Conference		1½	2	0	BA	All	5
C12	Business Conference		1½	2	0	BA	All	5
<i>Chemistry</i>								
Ch1	General Chemistry		4	3	3	Eng,LA	{ All,Eng LAPure & Applied Science	1 1 1
Ch2	General Chemistry	Ch1	4	3	3	Eng,LA	{ All,Eng LAPure & Applied Science	1 1 1
Ch3†	General Chemistry		4	3	3	Eng,LA	{ All,Eng LAPure & Applied Science	1 1 1
Ch4†	General Chemistry	Ch3	4	3	3	Eng,LA	{ All,Eng LAPure & Applied Science	1 1 1
Ch9	Qualitative Analysis	Ch1,2	3	4	0	Eng,LA	IV(E), LACChem	2
Ch11	Qualitative Anal. Lab.	Ch1,2,9	2½	0	11	Eng,LA	LACChem	2
Ch12	Quantitative Analysis	Ch1,2,9	2	3	0	Eng,LA	LACChem	2
Ch13	Quantitative Analysis	Ch1,2,12	2	3	0	Eng,LA	LACChem	3
Ch14	Quantitative Anal. Lab.	Ch1,2,11,12	1½	0	7	Eng,LA	LACChem	2
Ch15	Quantitative Anal. Lab.	Ch14	2	0	9	LA	Chem	3
Ch17	Quantitative Anal. Lab.	Ch1,2,13,14	1	0	5	Eng,LA	IV(E), LACChem	3
Ch31	Organic Chemistry	Ch1,2,40	2	3	0	Eng,LA	IV,LACChem	4
Ch32	Organic Chemistry	Ch31	2	3	0	Eng,LA	IV,LACChem	4
Ch33	Organic Chem. Lab.	Ch1,2,31,40	1	0	5	Eng,LA	IV,LACChem	4
Ch34	Organic Chem. Lab.	Ch32,33	1	0	5	Eng,LA	IV,LACChem	4
Ch35	Organic Chemistry	Ch32	2	3	0	Eng,LA	IV(E), LACChem	5
Ch37	Organic Chem. Lab.	Ch34,35	2	0	9	LA	Chem	5
Ch39	Organic Chem. Lab.	Ch34,35	1	0	5	Eng	IV	5

†NOTE: Students who have had no high school chemistry take Ch3 and Ch4 instead of Ch1 and Ch2.

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Chemistry — Continued</i>								
Ch40	Physical Chemistry	Ch12,14,13,17	2½	3	2	Eng,LA	IV(E), LACChem	3
Ch41	Physical Chemistry	Ch40	3½	4	4	LA	Chem	4
Ch42	Physical Chemistry	Ch41	3½	4	4	LA	Chem	4
Ch45	Physical Chemistry	Ch13,17,40	3	4	2	Eng	IV	4
Ch46	Physical Chemistry	Ch45	3	4	2	Eng	IV	4
Ch48	Colloidal Chemistry	Ch41	2½	3	2	LA	Chem	
Ch51	Sources of Information	Ch1,2	1	1	0	Eng,LA	{IV—Eng LACChem	2
Ch52	History of Chemistry	Ch1,2	2	3	0	Eng,LA	Elective	2
Ch63	Advanced Chemistry	Ch42	2	3	0	LA	Chem	5
Ch64	Advanced Chemistry	Ch35	2½	4	0	LA	Chem	5
Ch65	Thesis	Ch42	3	0	9	LA	Chem	
Ch66	Thesis	Ch42	4	0	12	LA	Chem	
Ch101	Adv. Physical Chemistry		3			LA	Graduate	
Ch102	Adv. Physical Chemistry		3			LA	Graduate	
Ch103	Adv. Organic Chemistry		3			LA	Graduate	
Ch104	Adv. Organic Chemistry		3			LA	Graduate	
Ch105	Graduate Thesis		2-4			LA	Graduate	
Ch106	Graduate Thesis		2-4			LA	Graduate	
Ch107	Graduate Thesis		2-4			LA	Graduate	
Ch108	Graduate Thesis		2-4			LA	Graduate	

*Chemical Engineering*

ChE1	Flow of Fluids	P1	2	3	0	Eng	IV	3
ChE2	Industrial Stoichiometry	Ch12,13	2	3	0	Eng	IV	3
ChE3	Unit Operations	ChE1	3	4	0	Eng	IV	4
ChE4	Unit Operations	ChE2,3	3	4	0	Eng	IV	4
ChE5	Unit Operations Lab.	ChE3	1½	0	4	Eng	IV	4
ChE6	Unit Operations Lab.	ChE4	1½	0	4	Eng	IV	4
ChE7	Inorganic Chem. Tech.	Ch9,ChE2	2	3	0	Eng	IV	5
ChE8	Organic Chem. Tech.	Ch32,ChE4	2	3	0	Eng	IV	5
ChE9	Chem. Process Lab.	ChE4	3	1	6	Eng	IV	5
ChE10	Chem. Eng. Projects	ChE4	4	1	6	Eng	IV	5
ChE11	Chem. Eng. Thermo- dynamics	Ch46	2	3	0	Eng	IV	5
ChE12	Engineering Materials		2	3	0	Eng	IV	5

*Civil Engineering*

CI3	Surveying I	M3	1½	3	0	Eng	I	2
CI4	Surveying II	CI3	2½	4	0	Eng	I	2
CI5	Surveying I, F & P	D1,CI3	1	0	5	Eng	I	2
CI6	Surveying II, F & P	CI4,5	1	0	5	Eng	I	2
CI7	Surveying III	CI3,4	2	3	0	Eng	I	3
CI8	Surveying IV	CI7	2	3	0	Eng	I	3
CI9	Surveying III, F & P	CI5,6	1	0	5	Eng	I	3
CI10	Surveying IV, F & P	CI8,9	1	0	5	Eng	I	3
CI11	Hydraulics	ME20,21	2½	4	0	Eng	I,II,III,V	3
CI12	Hydraulics	CI11	2	3	0	Eng	I,II,V	3
CI15	Theory of Structures	ME22,23	3	4	0	Eng	I	4
CI16	Theory of Structures	CI15	3	4	0	Eng	I	4
CI21	Sanitary Engineering	CI11,12	2	3	0	Eng	I	4
CI22	Sanitary Engineering	CI21	2	3	0	Eng	I	4
CI23	Engineering Structures	CI15,16,ME23	3	4	0	Eng	I	5
CI24	Engineering Structures	CI23	3	4	0	Eng	I	5
CI25	Concrete	ME23	2	3	0	Eng	I	5



No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Civil Engineering — Continued</i>								
CI26	Concrete	CI25	2	3	0	Eng	I	5
CI29	Design of Structures	CI23,25	3	2	6	Eng	I	5
CI30	Design of Structures	CI24,26,29	3	2	6	Eng	I	5
CI31	Highways	CI7,9	2	3	0	Eng	I	5
CI32	Highways	CI31	2	3	0	Eng	I	5
<i>Drawing and Graphic Arts</i>								
D1	Graphics I		3	0	6	Eng,LA	{E,All LA,Applied Science	1
D2	Graphics II	D1	3	0	6	Eng,LA	{E,All LA,Applied Science	1
D3	Engineering Drawing	D1	2	0	6	Eng	III	2
D4	Machine Drawing	D1	2	0	6	Eng	II,V	2
<i>English</i>								
E1	English I		3	3	0	Eng	All	1
E2	English I		3	3	0	Eng	All	1
E1-A	English I		3	3	0	LA	All	1
E2-A	English I	E1-A	3	3	0	LA	All	1
E1-B	English		3	3	0	BA	All	1
E2-B	English		3	3	0	BA	All	1
E3-B	Report Writing		2	3	0	BA	All	2
E4-B	Business Correspondence		2	3	0	BA	All	2
E5-B	Adv. Report Writing		2	3	0	BA	All	5
E5	Advanced Composition	E2-A	2	3	0	LA	Elective	
E6	Advanced Composition	E5	2	3	0	LA	Elective	
E7	Creative Writing	E6	2	3	0	LA	English & J.	3
E8	Creative Writing	E7	2	3	0	LA	English & J.	3
E9	Journalism I		3	4	0	LA,BA	{LA}Jour BA IV	3
E10	Journalism I	E9	3	4	0	LA,BA	{LA}Jour BA IV	3
E11	Journalism II	E10	3	4	0	BA	IV	3
E12	Journalism II	E11	3	4	0	BA	IV	3
E13	Effective Speaking		1	2	0	BA	All	4
E14	Effective Speaking	E13	1	2	0	BA	All	4
E15	Survey of English Lit.		3	4	0	LA,BA	Elective	2
E16	Survey of English Lit.		3	4	0	LA,BA	Elective	2
E17	English Drama before Shakespeare		2	3	0	LA	English	3
E18	Chaucer		2	3	0	LA	English	3
E19	Shakespeare		2	3	0	LA,BA	Elective	
E20	Shakespeare		2	3	0	LA,BA	Elective	
E21	19th Cent. Poetry I		2	3	0	LA	Elective	
E22	19th Cent. Poetry II		2	3	0	LA	Elective	
E23	17th & 18th Cent. Prose		2	3	0	LA	Elective	
E24	19th Cent. Prose		2	3	0	LA	Elective	
E25	Am. Lit. to 1860		2	3	0	LA,BA	Elective	
E26	Am. Lit. after 1860		2	3	0	LA,BA	Elective	
E27	Hist. of English Novel		2	3	0	LA	Elective	
E28	Hist. of English Novel		2	3	0	LA	Elective	
E29	Great European Writers		2	3	0	LA	Elective	
E30	Great European Writers		2	3	0	LA	Elective	
E31	Comparative Drama		2	3	0	LA	Elective	
E32	Comparative Drama		2	3	0	LA	Elective	
E33	Modern Lit. 1895-1915		2	3	0	LA	Elective	

No.	Course	Pre-requisite	Sem. Class Lab.			College	Curriculum	Yr.
			Hrs.	Hrs.	Hrs.			
English — Continued								
E34	Post-War Literature		2	3	0	LA	Elective	
E50	Shakespeare		2	3	0	Eng	Elective	
E51	Short Story		2	3	0	Eng,BA	Elective	
E52	American Novel		2	3	0	Eng,BA	Elective	
E61	Seminar		2	3	0	LA	Elective	
E62	Seminar	E61	2	3	0	LA	Elective	
Economics								
Ec1	Economic Geography		4	4	0	BA	All	1
Ec2	Com. & Ind. Hist. of U. S.		4	4	0	BA	All	1
Ec3	Economic Principles		2	3	0	{BA LA	AllBA Econ & Soc	2
Ec4	Economic Principles	Ec3	2	3	0	Same as Ec3		
Ec5	Economic Problems	Ec3	2	3	0	{BA LA	All Econ & Soc	3
Ec6	Economic Problems	Ec5	2	3	0	Same as Ec5		
Ec7	Money and Banking	Ec3,4	2	3	0	LA	Elective	
Ec8	Business Cycles	Ec6	2	3	0	LA,BA	Elective	
Ec9	Statistics in Business		2	3	0	BA	All	4
Ec10	Statistics in Business		2	3	0	BA	All	4
Ec11	Labor Problems	Ec3,4	3	4	0	LA,BA	Elective	
Ec12	Economic Systems	Ec3,4	2	3	0	LA,BA	Elective	
Ec14	Inter. Ec. Relations	Ec6	3	4	0	LA,BA	Elective	
Ec15	Hist. of Econ. Thought	Ec6	2	3	0	LA,BA	Elective	
Ec16	Adv. Econ. Theory	Ec15	2	3	0	LA,BA	Elective	
Ec17	Statistics		2	3	0	LA	Elective	
Ec18	Statistics	Ec17	2	3	0	LA	Elective	
Ec21	Economics		2	3	0	Eng	All	3
Ec22	Economics	Ec21	2	3	0	Eng	All	3
Ec61	Seminar		2	3	0	LA	Elective	
Ec62	Seminar	Ec61	2	3	0	LA	Elective	
Ec65	Thesis		3			LA	Elective	
Ec66	Thesis		3			LA	Elective	
Education								
Ed1	History of Education		2	3	0	LA	Elective	
Ed2	History of Education		2	3	0	LA	Elective	
Ed3	Educ. Measurements		2	3	0	LA	Elective	
Ed4	Educ. Org. and Adm.		2	3	0	LA	Elective	
Ed7	Comparative Education		2	3	0	LA	Elective	
Ed9	Educ. Sociology		2	3	0	LA	Elective	
Ed10	Educ. Philosophy		2	3	0	LA	Elective	
Ed11	Principles of Secondary Education		2	3	0	LA	Elective	
Ed12	Methods of Teaching in Secondary Schools		2	3	0	LA	Elective	
Electrical Engineering								
EL1	Electrical Eng. I	P2	1	2	0	Eng	III	2
EL2	Electrical Eng. I	EL1	1	2	0	Eng	III	2
EL5	Electrical Machinery	P2	4	4	4	Eng	I,II,V	2
EL6	Electrical Measurements	EL5	2½	3	3	Eng	II,V	3
EL9	Electrical Eng. II	P2	1½	3	0	Eng	III	3
EL10	Electrical Eng. II	M7	2	3	0	Eng	III	3
EL11	Electrical Eng. Lab.	EL2	1	0	3	Eng	III	3
EL12	Electrical Eng. Lab.	EL10	1	0	3	Eng	III	3
EL13	Elec. Measurements I		2½	4	0	Eng	III	3

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Electrical Engineering — Continued</i>								
EL14	Elec. Measurements II		2	3	0	Eng	III	3
EL17	Electrical Eng. III	EL10,M6	2	3	0	Eng	III	4
EL18	Electrical Eng. III		2	3	0	Eng	III	4
EL19	Electrical Testing Lab.	EL17	2	2	3	Eng	III	4
EL20	Electrical Testing Lab.	EL18,19	2	2	3	Eng	III	4
EL21	Electrophysics	M7	1	2	0	Eng	III	4
EL22	Electrophysics	EL21	2	3	0	Eng	III	4
EL23	Elec. Measurements Lab.		2	0	3	Eng	III	4
EL24	Adv. Measurements Lab.		2	0	3	Eng	III	4
EL25	Electrical Eng. IV	EL18	3	4	0	Eng	III	5
EL26	Electrical Eng. IV	EL25	3	4	0	Eng	III	5
EL27	Adv. Elec. Eng. Lab.	EL25	2	2	3	Eng	III	5
EL28	Adv. Elec. Eng. Lab.	EL26	2	2	3	Eng	III	5
EL29	Electrical Eng. V-A	EL22	2½	3	0	Eng	III	5
EL30	Electrical Eng. V-A	EL29	2½	3	0	Eng	III	5
EL31	Electrical Eng. V-B		2½	3	0	Eng	III	5
EL32	Electrical Eng. V-B	EL31	2½	3	0	Eng	III	5
EL33	Advanced Experimental Investigations		2	0	3	Eng	III	5
EL34	Advanced Experimental Investigations	EL33	2	0	3	Eng	III	5
<i>French</i>								
F1	Elementary French		3	5	0	LA	Elective	
F2	Elementary French	F1	3	5	0	LA	Elective	
F3	Intermediate French	F2	3	†	0	LA,BA	Elective	
F4	Intermediate French	F3	3	†	0	LA,BA	Elective	
F5	Advanced French	F4	3	†	0	LA	Elective	
F6	Advanced French	F5	3	†	0	LA	Elective	
F7	French Classicism	F6	2	3	0	LA	Elective	
F8	French Classicism	F7	2	3	0	LA	Elective	
F9	French Romanticism	F6	2	3	0	LA	Elective	
F10	French Romanticism	F9	2	3	0	LA	Elective	
<i>Banking and Finance</i>								
FI3	Business Finance		3	4	0	BA	All	2
FI4	Business Finance		3	4	0	BA	All	2
FI5	Corporation Finance		2	3	0	BA	All	3
FI6	Banking and Business		2	3	0	BA	All	3
FI8	Adv. Banking Problems		3	4	0	BA	II	4
FI9	Investments		3	4	0	BA	II	4
FI10	Investments		3	4	0	BA	II	4
FI12	Public Finance		2	3	0	BA	All	5
FI13	Real Estate Practice and Appraising		3½	4	0	BA	II	5
FI14	Insurance Principles and Practice		3½	4	0	BA	II	5
<i>German</i>								
G1	Elementary German		3	†	0	LA	Elective	
G2	Elementary German	G1	3	†	0	LA	Elective	
G3	Intermediate German	G2	3	4	0	LA	Elective	
G4	Intermediate German	G3	3	4	0	LA	Elective	
G5	Advanced German	G4	3	4	0	LA	Elective	

†NOTE: LA Elective for first year has 3 class hours; LA Elective, Upperclass, has 4 class hours; BA Elective in fourth year has 4 class hours.

‡NOTE: LA Elective for first year has 3 class hours; LA Elective, Upperclass, has 5 class hours.

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>German — Continued</i>								
G6	Advanced German	G5	3	4	0	LA	Elective	
G7	Class. Per. of Ger. Lit.	G6	2	3	0	LA	Elective	
G8	Class. Per. of Ger. Lit.	G7	2	3	0	LA	Elective	
G9	Ger. Lit. of 19th Cent.	G6	2	3	0	LA	Elective	
G10	Ger. Lit. of 19th Cent.	G9	2	3	0	LA	Elective	
<i>Art</i>								
GA51	History of Art I		2	3	0	Eng	Elective	
GA52	History of Art II		2	3	0	Eng	Elective	
<i>Government</i>								
Gv1	Am. Govt. and Politics		3	3	0	{BA LA	All SocSci	1 1
Gv2	Am. Govt. and Politics		3	3	0	{BA LA	All SocSci	1 1
Gv3	Comparative Govt.		2	3	0	{LA BA	Soc & Econ Elective	3
Gv4	Comparative Govt.		2	3	0	{LA BA	Soc & Econ Elective	3
Gv5	Am. Const. Law		2	3	0	LA,BA	Elective	
Gv5-B	Constitutional Law		3	4	0	BA	V	4
Gv6	Am. Const. Law	Gv5	2	3	0	LA,BA	Elective	
Gv7	Origins of Political Theory		2	3	0	LA,BA	Elective	
Gv8	Modern Political Theory		2	3	0	LA,BA	Elective	
Gv51	Am. Const. Law		2	3	0	Eng	Elective	
<i>Geology</i>								
Gy1	General Geology		2	3	0	Eng	I	4
Gy2	General Geology	Gy1	2	3	0	Eng	I	4
Gy5	Historical Geology	Gy2	2	3	0	LA	Elective	
Gy6	Historical Geology	Gy5	2	3	0	LA	Elective	
Gy50	Geology		2	3	0	Eng,BA	Elective	
<i>History</i>								
H1	Hist. of Civilization		4	4	0	LA	SocSci	1
H2	Hist. of Civilization		4	4	0	LA	SocSci	1
H5	Europe 1789-1870		2	3	0	LA,BA	Elective	
H6	Europe 1870-1938		2	3	0	LA,BA	Elective	
H7	England to 1688		2	3	0	LA	English	3
H8	England since 1688		2	3	0	LA	English	3
H9	U. S. to 1865		2	3	0	LA,BA	Elective	
H10	U. S. since 1865		2	3	0	LA,BA	Elective	
H11	Latin Am. History		2	3	0	LA	Elective	
H12	Latin Am. History		2	3	0	LA	Elective	
H13	English Const. History		3	4	0	LA	Elective	
H14	American Const. History		3	4	0	LA	Elective	
<i>Industrial Administration</i>								
IA1	Industrial Mgt. I		2	3	0	BA	All	3
IA2	Industrial Mgt. II		2	3	0	BA	All	3
IA3	Personnel Administration		3	4	0	BA	IV	4
IA4	Personnel Problems		3	4	0	BA	IV	4
IA5	Motion and Time Study		3½	4	0	BA	IV	5
IA14	Industrial Finance		3½	4	0	BA	IV	5
<i>Industrial Engineering</i>								
IN3	Prod. Processes I		2½	4	0	Eng	II,III,V	2
IN4	Prod. Processes II		1½	2	0	Eng	II,III,V	2



No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Industrial Engineering — Continued</i>								
IN5	Industrial Mgt. I		2	3	0	{Eng Eng	II,V I,IV	4 5
IN6	Industrial Mgt. II	IN5	2	3	0	Same as IN5		
IN7	Industrial Accounting		2	1	4	Eng	V	4
IN8	Industrial Accounting	IN7	2	1	4	Eng	V	4
IN9	Cost Accounting	IN8	2½	2	2	Eng	V	5
IN10	Cost Accounting	IN9	2½	2	2	Eng	V	5
IN11	Methods Engineering	IN6	2½	2	2	Eng	V	5
IN14	Industrial Finance		2½	3	0	Eng	V	5
IN15	Sales Engineering		2½	3	0	Eng	V	5
IN16	Personnel Administration		2	3	0	Eng	II,V	5
IN18	Sales Eng. Problems		2½	3	0	Eng	V	5
IN21	Contracts		2	3	0	Eng	II,V	5
IN23	Industrial Statistics		2½	2	2	Eng	V	4
IN24	Industrial Statistics		2½	2	2	Eng	V	4
IN25	Industrial Plants	ME23,30	2½	6	0	Eng	V	5
IN26	Industrial Plants	IN25	2½	6	0	Eng	V	5

*Business Law*

L1	Legal Bases of Business		3	3	0	BA	All	1
L2	Business Associations		4	4	0	BA	All	1
L5	Legal Aspects I		2	3	0	BA	All	5
L6	Legal Aspects II		2	3	0	BA	All	5

*Mathematics*

M1	College Algebra		3	3	0	{Eng LA	All App & Pure Sci	1 1
M3	Trigonometry		2	2	0	Same as M1		
M4	Analytic Geometry and Intro. to Calculus	M1,3	5	5	0	Same as M1		
M5	Differential Calculus	M1,4	3	4	0	{Eng LA	All Math&Phys, Chem	2 2
M6	Integral Calculus	M5	3	4	0	Same as M5		
M7	Differential Equations I	M6	2½	4	0	{Eng LA	III,IV Math&Phys	3 3
M8	Differential Equations II	M6,7	3	4	0	LA	Math&Phys	
M9	Higher Algebra	M1,4	3	4	0	LA	Elective	
M10	Curve Analysis	M5	3	4	0	LA	Elective	
M11	Solid Anal. Geom.	M4	3	4	0	LA	Elective	
M12	Modern Geometry	M4	3	4	0	LA	Elective	
M13	Spherical Trig.	M3	3	4	0	LA	Elective	
M14	Hist. of Math.		2	3	0	LA	Elective	
M15	Advanced Calculus	M6	3	4	0	LA	Elective	
M16	Advanced Calculus	M15	3	4	0	LA	Elective	
M17	Series	M6	3	4	0	LA	Math&Phys	3
M18	Theory of Equations	M5	3	4	0	LA	Math&Phys	3

*Marketing and Advertising*

MA1	Marketing Principles		3	4	0	BA	All	3
MA2	Marketing Problems		3	4	0	BA	All	3
MA3	Sales Management		3	4	0	BA	III	4
MA4	Sales Management		3	4	0	BA	III	4
MA5	Advertising Principles		3	4	0	BA	III,VI	4
MA6	Advertising Problems		3	4	0	BA	III,VI	4
MA7	Retail Store Mgt.		3½	4	0	BA	III	5
MA8	Retail Merchandising		3½	4	0	BA	III	5

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<b>Mechanical Engineering</b>								
ME1	Mechanism		3	6	0	Eng	II & V	3
ME15	Industrial Plants	ME23,32	2½	6	0	Eng	II-Elective	5
ME16	Industrial Plants	ME15	2½	6	0	Eng	II-Elective	5
ME20	Applied Mech. (Statics)	P1	3	4	0	Eng	All	2
ME21	Applied Mech. (Kinetics)	ME20	3	4	0	Eng	All	3
ME22	Strength of Materials	ME20,21,P4	3	4	0	Eng	All	3
ME23	Strength of Materials	ME22	2	3	0	Eng	I,II,V	4
ME24	Advanced Mechanics	ME23	2	3	0	Eng	I,II	4
ME27	Metallography	IN3	2	3	0	Eng	II	4
ME29	Heat Eng. (Power Pl't Eq.)		2	3	0	Eng	II & V	3
ME30	Heat Eng. (Thermo.)	P4	3	4	0	Eng	II,IV,V	3
ME31	Heat Engineering	ME30,29	2½	4	0	Eng	II	4
ME32	Heat Engineering	ME31	2½	4	0	Eng	II	4
ME33	Refrigeration	ME32	2	3	0	Eng	II-Elective	5
ME34	Steam Turbines	ME31	2	3	0	Eng	II-Elective	5
ME35	Heat Engineering	P4	2	3	0	Eng	I	3
ME36	Heat Engineering	ME35	2½	2	3	Eng	III	4
ME37	Diesel Engines	ME32	2	3	0	Eng	II-Elective	5
ME38	Diesel Lab.	ME37	2	1	3	Eng	II-Elective	5
ME39	Engine Dynamics	ME21	2½	4	0	Eng	II-Elective	5
ME40	Aerodynamics	ME21,CII2	2	3	0	Eng	II-Elective	4
ME42	Heating and Air Con- ditioning	ME21,CII2	2	3	0	Eng	II-Elective, V	4
ME44	Power Plant Eng.	ME32	2½	4	0	Eng	II	5
ME45	Air Cond. Design	ME42	2½	6	0	Eng	II-Elective	5
ME46	Air Cond. Design	ME45	2½	6	0	Eng	II-Elective	5
ME48	Air Cond. Lab.	ME45	2	1	3	Eng	II-Elective	5
ME51	Machine Design	ME24	3	6	0	Eng	II	5
ME52	Machine Design	ME51	3	6	0	Eng	II	5
ME54	Diesel Eng. Design	ME39	2½	6	0	Eng	II-Elective	5
ME61	Mechanical Eng. Lab.	ME29,31	2	0	4	Eng	II & V	4
ME62	Mechanical Eng. Lab.	ME32,61	2	0	4	Eng	II & V	4
ME63	Mechanical Eng. Lab.	ME32,62	2½	1	3	Eng	II	5
ME69	Testing Materials Lab.	ME22	1½	1	3	Eng	I & III	4
ME70	Testing Materials Lab.	ME69	1½	1	3	Eng	I	4
ME73	Aircraft Structures	ME23	2	3	0	Eng	II-Elective	5
ME74	Aeronautical Lab.	ME40	2	1	3	Eng	II-Elective	5
ME76	Aircraft Eng. Design	ME39	2½	6	0	Eng	II-Elective	5

**Physics**

P1-A	Survey of Physical Sciences		4	4	0	{ LA BA	Soc Sci Elective All	1 1
P2-A	Survey of Physical Sciences		4	4	0	Same as P1-A		
P1	Physics I		3	3	0	{ Eng LA	All App & Pure Sci	1 1
P2	Physics I		3	3	0	Same as P1		
P3	Physics II	P1,2	2	3	0	{ Eng LA	All Math&Phys, Chem	2 2
P4	Physics II	P1,2	2	3	0	{ Eng LA	All Math&Phys, Chem	2 2

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Physics — Continued</i>								
P5	Physics Laboratory	P1,2	1	0	2	{ Eng LA	I,II,IV,V Math&Phys, Chem	2 2
P6	Physics Laboratory	P1,2	1	0	2	{ Eng LA	I,II,IV,V Math&Phys, Chem	2 2
P7	Physics Laboratory	P1,2	2	4	0	Eng	III	2
P8	Physics Laboratory	P1,2	2	4	0	Eng	III	2
P9	Optics	P3,M6	3	3	2	LA	Math&Phys	3
P10	Optics	P9	3	3	2	LA	Math&Phys	3
P13	Acoustics	P3,M6	3	3	2	LA	Elective	
P14	Acoustics	P13	3	3	2	LA	Elective	
P15	Modern Physics	P4,M7	3	3	2	LA	Elective	
P16	Modern Physics	P15	3	3	2	LA	Elective	
P65	Thesis		3			LA	Elective	
P66	Thesis		3			LA	Elective	
P101	Theoretical Physics		3			LA	Graduate	
P102	Theoretical Physics		3			LA	Graduate	
P103	Quantum Mechanics		3			LA	Graduate	
P104	Quantum Mechanics		3			LA	Graduate	
P105	Applied Mathematics		3			LA	Graduate	
P106	Applied Mathematics		3			LA	Graduate	
P107	Graduate Thesis		2-4			LA	Graduate	
P108	Graduate Thesis		2-4			LA	Graduate	
P109	Graduate Thesis		2-4			LA	Graduate	
P110	Graduate Thesis		2-4			LA	Graduate	
<i>Public Administration</i>								
PA2	Public Administration I		3	4	0	BA	V	4
PA4	Political Concepts		3	4	0	BA	V	4
PA5	Bus. and Govt.		2	3	0	BA	All	5
PA7	Public Administration II		3	4	0	BA	V	5
PA8	Public Administration III		3	4	0	BA	V	5
<i>Physical Education</i>								
PE1	Hygiene		1	1	0	All	All	1
PE5	Prin. of Phys. Ed.		2	3	0	LA	Elective	
PE6	Play and Recreation		2	3	0	LA	Elective	
PE7	Hist. of Phys. Ed.		2	3	0	LA	Elective	
PE8	Admin. of Phys. Ed.		2	3	0	LA	Elective	
PE9	Football		2	3	0	LA	Elective	
PE11	Track and Field Events		2	3	0	LA	Elective	
PE12	Basketball and Baseball		2	3	0	LA	Elective	
<i>Philosophy</i>								
Ph1	Intro. to Philosophy		2	3	0	LA	Elective	
Ph2	Problems of Philosophy		2	3	0	LA	Elective	
Ph3	History of Philosophy		2	3	0	LA	Elective	
Ph4	History of Philosophy		2	3	0	LA	Elective	
Ph5	Philosophy of Religion		2	3	0	LA	Elective	
Ph6	Logic		2	3	0	LA	Elective	
Ph50	Philosophy		2	3	0	Eng,BA	Elective	
<i>Psychology</i>								
Ps1	Intro. to Diff. Psych.		2	3	0	LA	{ EngI,SS, Biol,M&P	2
Ps2	General Psychology	Ps1	2	3	0	LA	{ EngI,SS, Biol,M&P	2
Ps1-B	Psychology		2	3	0	BA	All	2

No.	Course	Pre-requisite	Sem. Hrs.	Class Hrs.	Lab. Hrs.	College	Curriculum	Yr.
<i>Psychology — Continued</i>								
Ps2-B	Psychology		2	3	0	BA	All	2
Ps3	Experimental Psychology	Ps2	3	4	0	LA	Elective	
Ps4	Differential Psychology	Ps3	3	4	0	LA	Elective	
Ps5	Educ. Psychology	Ps2	2	3	0	LA	Elective	
Ps6	Educ. Psychology	Ps5	2	3	0	LA	Elective	
Ps7	Soc. Psych. of Everyday Life	Ps2	2	3	0	LA,BA	Elective	
Ps8	Soc. Psych. Theory and Methods	Ps7	2	3	0	LA,BA	Elective	
Ps9	Psych. of Personality	Ps2	2	3	0	LA	Elective	
Ps10	Abnormal Psychology	Ps9	2	3	0	LA	Elective	
Ps11	Applied Psychology	Ps9	2	3	0	LA	Elective	
Ps13	Psychological Testing	Ps4	2	3	0	LA	Elective	
Ps14	Advanced Experimental Laboratory	Ps3	2	3	0	LA	Elective	
Ps50	General Psychology		2	3	0	Eng	Elective	
Ps61	Seminar							
Ps62	Seminar	Ps61	2	3	0	LA	Elective	
<i>Sociology</i>								
S1	Intro. to Sociology		2	3	0	{ Eng BA LA	All Elective Engl & Soc Sci	4 3 2
S2	Principles of Sociology		2	3	0	Same as S1		
S3	Social Problems	S1,2	2	3	0	LA,BA	Elective	
S4	Social Pathology	S1,2	2	3	0	LA,BA	Elective	
S5	Criminology	S1,2	2	3	0	LA	Elective	
S6	Penology	S5	2	3	0	LA	Elective	
S7	Prin. of Social Ethics	S1,2	2	3	0	LA,BA	Elective	
S8	Probs. in Social Ethics	S7	2	3	0	LA,BA	Elective	
S9	The Family	S1,2	2	3	0	LA	Elective	
S10	The Family	S9	2	3	0	LA	Elective	
S11	Social Control	S3,4,Ph2	2	3	0	LA,BA	Elective	
S12	Social Progress	S11	2	3	0	LA,BA	Elective	
S13	Population Problems	S1,2	2	3	0	LA	Elective	
S14	Urban Sociology	S1,2	2	3	0	LA,BA	Elective	
S15	History of Sociological Thought	S3,4,Ph2	2	3	0	LA	Elective	
S16	Sociology of Religion	S3,4	2	3	0	LA	Elective	
S50	The Family		2	3	0	Eng,BA	Elective	
S61	Seminar		2	3	0	LA	Elective	
S62	Seminar	S61	2	3	0	LA	Elective	
S65	Thesis		3			LA	Elective	
S66	Thesis		3			LA	Elective	
<i>Spanish</i>								
Sp1	Elementary Spanish		3	5	0	LA	Elective	
Sp2	Elementary Spanish	Sp1	3	5	0	LA	Elective	
Sp3	Intermediate Spanish	Sp2	3	4	0	LA	Elective	
Sp4	Intermediate Spanish	Sp3	3	4	0	LA	Elective	
<i>Unclassified</i>								
U4	Business Policy		2	3	0	BA	All	5
U50	Contracts		2	3	0	Eng	Elective	
	Orientation		0	1	0	All	All	1
	Physical Training		0	2	0	All	All	1
	Thesis (see page 95.)							



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DEPARTMENT OF ADMISSIONS  
9 A.M. TO 4 P.M. daily  
Saturday 12.00 N'N  
Wednesday Evenings by  
Appointment

Northeastern University

College of Business Administration

Paste a Small  
Photo or  
Snapshot  
in This Space

APPLICATION FOR ADMISSION

(A non-returnable fee of five dollars must accompany this application. Make checks, money orders, or drafts payable to Northeastern University)

Boston, Mass.....19

To Director of Admissions:

I (Please print name in full) .....

hereby respectfully apply for admission to the College of Business Administration to major in the field checked:

- ☐ Accounting
- ☐ Banking and Finance
- ☐ Marketing and Advertising
- ☐ Industrial Administration
- ☐ Public Administration
- ☐ Journalism
- ☐ Pre-Legal

for the school period beginning ..... 19.....

NOTE: The applicant should fill out the following form (both sides) with care.

Residence.....Street  
Town or City.....  
State.....Tel.....  
Date of Birth.....Age.....  
Place of Birth.....  
Race.....Religion.....Nationality.....  
Graduate of.....High School, Year.....  
Location of High School.....  
Name of Principal.....  
Other high schools you have attended.....  
Names of Principals.....  
If not a graduate, state the years of attendance and why you left.....  
.....  
Father's, Mother's, or Guardian's Name.....  
.....  
Address.....  
Father's work, business or profession.....  
Names and addresses of two other persons, to whom we may direct inquiries concerning you.  
.....  
.....

Weight.....Height.....

Have you any physical infirmities? Explain, if any.....

.....

.....

.....

.....

Defects of speech.....

Defects of hearing.....

Defects of sight.....

Bodily infirmities.....

Is your general health good, fair, or poor?.....

Have you done collegiate work elsewhere?.....

If so, name and address of college or university.....

.....

.....

Name of person who will furnish transcript of your college record.....

.....

.....

Do you expect advance credit for past collegiate work?.....

.....

List all athletics and other extra curricula high school activities you

have engaged in.....

.....

.....

.....

Names and addresses of all past employers with brief description of

each job, length of employment, and wages received.....

.....

.....

.....

.....

.....

.....

### Declaration of Parent or Guardian

This application has been read by me and has my approval.

.....

Signature of Parent or Guardian



Date . . . . .

Milton J. Schlagenhauf, Director of Admissions  
Northeastern University  
360 Huntington Avenue  
Boston, Mass.

Dear Sir:

Please send me additional information on the following points:

. . . . .

. . . . .

. . . . .

. . . . .

. . . . .

. . . . .

. . . . .

. . . . .

Name . . . . .

Street and Number . . . . .

Town or City . . . . .

State . . . . .



# NORTHEASTERN UNIVERSITY

## COLLEGE OF LIBERAL ARTS

Offers a broad program of college subjects serving as a foundation for the understanding of modern culture, social relations, and technical achievement. Varied opportunities available for vocational specialization. Degree: Bachelor of Science or Bachelor of Arts.

## COLLEGE OF ENGINEERING

Offers curricula in Civil, Mechanical (with Air-Conditioning and Aeronautical options), Electrical, Chemical, and Industrial Engineering. Class room study is supplemented by experiment and research in well-equipped laboratories. Degree: Bachelor of Science in the professional field of specialization.

## COLLEGE OF BUSINESS ADMINISTRATION

Offers six curricula: Accounting, Banking and Finance, Marketing and Advertising, Industrial Administration, Journalism, and Public Administration. Each curriculum represents in itself a broad survey of business technique, differing from the others chiefly in emphasis. Degree: Bachelor of Science in Business Administration.

---

## SCHOOL OF LAW

Offers day and evening undergraduate programs admitting those who present a minimum of two years of college work, each program leading to the degree of Bachelor of Laws. Also graduate program in the evening leading to the degree of Master of Laws. Co-educational.

## SCHOOL OF BUSINESS

Offers curricula through evening classes leading to the degree of Bachelor of Business Administration with appropriate specification in Accounting, Management (with Industrial and Merchandising options), and Engineering and Business or the degree of Bachelor of Commercial Science in Law and Business Management. Preparation for C.P.A. examinations. Shorter programs arranged to meet special needs. Co-educational.

## EVENING COURSES OF THE COLLEGE OF LIBERAL ARTS

Certain courses of the College of Liberal Arts are offered during evening hours, affording concentration in Economics, English, History and Government, or Social Science. A special program preparing for admission to the School of Law is also available. The program is equivalent in hours to one-half the requirement for the A.B. or S.B. degree. Associate in Arts title conferred. Co-educational.

---

The Colleges of Liberal Arts, Engineering, and Business Administration offer day programs for men only and are conducted on the co-operative plan. After the freshman year, students may alternate their periods of study with periods of work in the employ of business or industrial concerns at ten-week intervals. Under this plan they gain valuable experience and earn a large part of their college expenses.

---

In addition to the above schools the University has affiliated with it and conducts: the Lincoln Technical Institute offering, through evening classes, courses of college grade in various fields of engineering leading to the title of Associate in Engineering; and the Lincoln Preparatory School, an accredited evening school preparing for college entrance and offering other standard high school programs.

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For further information regarding any of the above schools, address

NORTHEASTERN UNIVERSITY

Law School  
47 Mt. Vernon Street

Other Schools  
360 Huntington Avenue

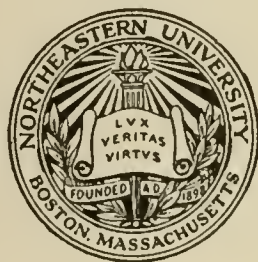
Boston, Massachusetts  
Telephone: KENmore 5800





Northeastern University  
SCHOOL OF LAW  
*Announcement of Courses*

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THREE-YEAR DAY PROGRAM  
FOUR-YEAR EVENING PROGRAM

1942 - 1943

## GIFTS AND BEQUESTS

Northeastern University will welcome gifts and bequests for the following purposes:

- (a) For its building program.
- (b) For general endowment.
- (c) For specific purposes which may especially appeal to the donor.

It is suggested that, when possible, those contemplating gifts or bequests confer with the President of the University regarding the University's needs before legal papers are drawn.

Gifts and bequests should be made only in the University's legal name, which is "Northeastern University."

## OFFICE HOURS

JUNE 15, 1942 — AUGUST 15, 1942

Daily (*except Saturdays and Sundays*) 8.45 a.m.—5.00 p.m.  
Saturdays, 8.45 a.m.—12.00 m.

AUGUST 16, 1942 — JUNE 16, 1943

Daily (*except Saturdays and Sundays*) 8.45 a.m.—9.00 p.m.  
Saturdays, 8.45 a.m.—1.00 p.m.

The Central Offices of the University are open from 8.45 a.m. to 9.00 p.m. the entire year.

## LIBRARY HOURS

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Daily (*except Saturdays and Sundays*) 8.45 a.m.—5.00 p.m.  
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Sundays, 3.00 p.m.—8.00 p.m.  
Holidays, 12.00 m.—6.00 p.m.

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COMMUNICATIONS SHOULD BE ADDRESSED TO

NORTHEASTERN UNIVERSITY  
SCHOOL OF LAW

47 MT. VERNON STREET, BOSTON, MASS.

Telephone, Kenmore 5800

CALENDAR  
DAY AND EVENING CLASSES

1942-43

FALL SEMESTER

14 Sept.	Monday	Class lectures begin, all classes.
9 Nov.	Monday	Payment of second installment of tuition due.
26 Nov.	Thursday	Thanksgiving Day — classes suspended.
24 Dec.	Thursday	1 p.m. Christmas recess begins.
28 Dec.	Monday	9 a.m. Classes resumed.
31 Dec.	Thursday	First semester ends.

WINTER SEMESTER

4 Jan.	Monday	Class lectures begin, all classes.
4 Jan.	Monday	Payment of third installment of tuition due.
1 March.	Monday	Payment of fourth installment of tuition due.
30 April	Friday	Second semester ends.

SUMMER SEMESTER

3 May	Monday	Class lectures begin.
3 May	Monday	Tuition payment due.
21 June	Monday	Final payment Summer session due.
20 Aug.	Friday	Third semester ends.

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\*On leave of absence, military service.

## HISTORICAL

NORTHEASTERN UNIVERSITY SCHOOL OF LAW was established in 1898 with the co-operation of the Honorable James R. Dunbar, Professor James Barr Ames, then Dean of the Harvard University School of Law, and Samuel Bennett, then Dean of Boston University School of Law. Later such men as Ezra Thayer, Dean of Harvard University School of Law, Samuel Elder, and Robert G. Dodge were active upon the Corporation of the school and were largely instrumental in shaping its policies and its development. The school has had over the years an unusual faculty of men who have been outstanding leaders in the profession. It has also enjoyed highly favorable recognition and endorsement by the bench and by the bar. The growth and influence of the school has been marked. Its graduates who have entered the practice of the law are men of high professional attainment. Many of the alumni occupy positions of leadership as executives in various fields of business.

## BEACON HILL BUILDING

The Beacon Hill Building, located at 47 Mt. Vernon Street and occupied exclusively by the Law School, has excellent classroom facilities, adequate library areas, and administrative and instructional offices. Opportunities are provided for study, effective use of the library, and contacts with the faculty outside the classroom. This building is within a few minutes' walk from the State House and from the Court House, where the Supreme Judicial Court, the Superior Court for Suffolk County, the Land Court, the Probate Court for Suffolk County, and the Municipal Court for the City of Boston are housed.

## CURRICULA

The Law School is divided into two divisions — the Day Division and the Evening Division. The same curriculum is offered in each Division, and the standards of work and graduation requirements are the same. A minimum of eighty-two semester hours of classroom instruction is required for the degree of Bachelor of Laws.

**THREE-YEAR DAY COURSE.** The completion of the course of study leading to the LL.B. degree in the Day Division requires that students shall be in regular attendance for a period of three years of thirty-two weeks each, exclusive of holidays, and shall devote substantially all of their working hours to their law studies.

**FOUR-YEAR EVENING COURSE.** The Evening Division course leading to the LL.B. degree covers a period of four school years of thirty-six weeks each, exclusive of holidays, and is equivalent in content and the number of classroom hours to the day program. The evening program is basically for those who are regularly employed during the day and can attend only the evening sessions of the School.

### ACCELERATED WARTIME PROGRAM

During the period of the national emergency, the School of Law will operate on a three semester academic year, by the addition of a summer semester to the regular school year. This program is designed to provide opportunities for students to enter oftener than once a year and to accelerate the graduation of students who desire to continue their law study during the summer months. By attending two summer sessions, in addition to the regular school years, a student will be able to reduce the time normally required for completion of the entire course in either the Day or the Evening School by as much as one year, thus enabling a day student to complete his program in two calendar years and an evening student his program in three calendar years.

Entering students may enroll at the beginning of any semester, either in September, February, or June. The accelerated program provides an opportunity to students to complete a substantial part, possibly all, of their law study before entering military service. For students not eligible for military service it offers an opportunity to shorten the time required for their professional training at a time when there is a greater demand than has hitherto been the case for legally trained men and women both in private law offices and in the government services.

Students who do not desire to accelerate their programs may attend the regular school year, only omitting the work of the summer semester. There is at present a tendency among colleges of Arts and Sciences to speed up the graduation of their students and thus enable them to accomplish as much of their education as possible before being inducted into national service. The accelerated law school program is designed to correlate with the program of the Arts colleges.

The new program makes no reduction in the requirement for graduation from the Law School. The time requirement is accomplished by dividing each year into three terms, using the summer months for law study. Each of these terms or semesters is of the same length as the present semester.

### METHOD OF INSTRUCTION

The primary purpose of the School is to prepare for the practice of the law wherever the English common law system prevails, particular attention being given to the law of Massachusetts and the other New England States. To accomplish this aim, the instruction is designed to train the students in the fundamental principles of the common law and to develop their powers of legal reasoning and analysis. The instruction is based on the case method combining the study of basic principles with the analysis and interpretation of decided cases. Such analysis and discrimination constitutes a large portion of the work of a lawyer in his active practice. No knowledge of principles acquired wholly apart from the facts upon which they arise can replace the practical values which come from the actual dissection and analysis of cases by the student in his study or with the instructors in the classroom. Furthermore the knowledge of the law and the understanding of the growth and development of the law, which the student acquires through the case system, gives him a basis upon which to build as the law grows.



## ADMISSION OF STUDENTS

**GENERAL REGULATIONS.** Catalogs of the School of Law, application blanks for admission, and special information concerning the School may be obtained by calling or writing the Registrar of the School of Law, 47 Mt. Vernon Street, Boston, Massachusetts.

The School of Law is open to men and women. Applicants for the degree must be at least eighteen years of age upon entering the first year class, and must be of good moral character. Applicants for admission to Northeastern University School of Law must comply with the requirements established by the American Bar Association and the Association of American Law Schools.

All applicants for admission must file with the Registrar of the School of Law:

1. An application for admission to be made in writing upon the official form.
2. An official transcript of college records.
3. Two letters of reference concerning character and ability.

These credentials, wherever possible, should be filed prior to the registration period.

All requirements with respect to admission apply to applicants entering either for the day or evening curriculum of the School of Law.

**ADMISSION TO CANDIDACY FOR THE DEGREE OF BACHELOR OF LAWS.** Any person may apply for admission as a candidate for the degree of Bachelor of Laws:

1. Who is a graduate of a college of approved standing and has received his Bachelor's degree, or
2. Who has satisfactorily completed in a college of approved standing one-half of the work acceptable for the Bachelor's degree granted on the basis of a minimum period of four years' study. The applicant's pre-legal work must have been passed with a scholastic average at least equal to the average required for graduation in the college attended, and such average shall be based on all the work undertaken by the student in his pre-law curriculum, exclusive of non-theory courses in military science, hygiene, domestic arts, physical education, vocal or instrumental music, or courses without intellectual content of substantial value.

**ADMISSION TO ADVANCED STANDING.** An applicant who has complied with the entrance requirements for regular first-year law students prior to beginning his law study and who has successfully completed one or more years of work in a law school of approved standing may, upon the presentation of a certificate of scholarship and of honorable dismissal from such school, be admitted to advanced standing to the extent and on such conditions as the full-time Faculty may prescribe. No applicant will be admitted, either as a candidate for advanced standing or for admission to

the first-year class, who shall have previously attended another law school and who cannot return to that school in good standing. No credit will be given for work completed in a law school which is not approved by the American Bar Association. Students previously disqualified on account of low scholarship in another law school will not be admitted to the School of Law, except in exceptional cases where the Dean and Faculty of the School of Law have reason to believe that the failure was occasioned by factors other than lack of capacity.

**SPECIAL STUDENTS.** A limited number of applicants, who are at least twenty-three years of age and who cannot qualify under the foregoing requirements for admission as candidates for the degree of Bachelor of Laws, may, in exceptional cases and at the discretion of the full-time Faculty, be admitted as special students. Applicants for admission as special students must give evidence of such general education and experience as will enable them to carry on and profit by the work of the School. Special students may not be candidates for a degree in the School of Law.

**READMISSION.** Former students who have not been registered in the School during the two school years immediately preceding that in which they seek readmission, will be readmitted only at the discretion of the Faculty, and must, upon their return to the School, meet the entrance and degree requirements in force at the time of their re-entry.

**IN GENERAL.** The Faculty of the School of Law reserves the right to refuse admission or readmission to any applicant. In determining the question of such admission or readmission to the School, the Faculty may examine such applicant either orally or in writing, or may base its decision upon the past record of the applicant.

## THE COURSES OF INSTRUCTION

ADMINISTRATIVE LAW	3 Semester Hours
Gellhorn, <i>Administrative Law Cases and Comments</i>	
AGENCY	2 Semester Hours
Mechem's <i>Cases on Agency</i> , 3d ed.	
BILLS AND NOTES	3 Semester Hours
Aigler's <i>Cases on Negotiable Paper and Banking</i>	
BUSINESS ASSOCIATIONS	5 Semester Hours
Ballantine and Lattin, <i>Cases on Private Corporations</i>	
CONFLICT OF LAWS	4 Semester Hours
Cheatham, Dowling, Goodrich and Griswold, <i>Cases on Conflict of Laws</i>	
CONSTITUTIONAL LAW	3 Semester Hours
Long, <i>Cases on Constitutional Law</i> , 3d ed.	
CONTRACTS	6 Semester Hours
Shepherd's Revision, <i>Costigan's Cases on Contracts</i> , 4th ed.	
CRIMINAL LAW	4 Semester Hours
Sayre, <i>Cases on Criminal Law</i>	
DAMAGES	2 Semester Hours
Crane, <i>Cases on Damages</i> , 2d ed.	
EQUITY	5 Semester Hours
McClintock, <i>Cases on Equity</i>	
EVIDENCE	5 Semester Hours
Morgan and Maguire, <i>Cases on Evidence</i>	
INSURANCE	2 Semester Hours
Vance, <i>Cases on Insurance</i> , 3d ed.	
LANDLORD AND TENANT	1 Semester Hour
Simpson, <i>Massachusetts Law of Landlord and Tenant</i>	
MORTGAGES	2 Semester Hours
Campbell, <i>Cases on Mortgages</i> , 2d ed.	
PERSONAL PROPERTY	2 Semester Hours
Bigelow, <i>Cases on Personal Property</i> , 3d ed.	
PLEADING AND PRACTICE I	3 Semester Hours
Magill and Chadburn, <i>Cases on Civil Procedure</i>	
PLEADING AND PRACTICE II	3 Semester Hours
<i>To be announced</i>	
PRACTICE COURT	1 Semester Hour
PROPERTY I	3 Semester Hours
Bigelow, <i>Cases on Rights in Land</i>	
PROPERTY II	3 Semester Hours
Aigler, <i>Cases on Titles</i> , 2d ed.	
PROPERTY III	3 Semester Hours
Simes, <i>Cases on Future Interests</i>	
SALES	3 Semester Hours
Williston and McCurdy, <i>Cases on Sales</i> , 2d ed.	
TAXATION	2 Semester Hours
Magill and Maguire, <i>Taxation</i> , 3d ed.	
TORTS	6 Semester Hours
Hepburn, <i>Cases on Torts</i> , 2d ed.	
TRUSTS	4 Semester Hours
Scott, <i>Cases on Trusts</i> , 3d ed.	
WILLS	3 Semester Hours
Mechem and Atkinson, <i>Cases on Wills and Administration</i>	

## ELECTIVE COURSES

APPELLATE PRACTICE AND BRIEFS	3 Semester Hours
CONVEYANCING SEMINAR	3 Semester Hours
LABOR LAW	2 Semester Hours
LEGAL HISTORY AND JURISPRUDENCE	4 Semester Hours
PUBLIC UTILITIES	2 Semester Hours



## REQUIREMENTS FOR DEGREE OF BACHELOR OF LAWS

To be eligible for the LL.B. degree, a student must have met the following requirements:

**AGE.** A student must be twenty-one years of age at the time of receiving the degree.

**PERIOD OF STUDY.** A student must have been in regular attendance for a period of three\*years in the day curriculum or four\*years in the evening curriculum. Students admitted on advanced standing in the Day Division must spend a minimum of one full year in attendance and attain the weighted average required of regular senior students; those admitted to advanced standing in the Evening Division will be required to spend a minimum of two full years in attendance and attain the weighted average required of third and fourth year students during their two years of residence.

**EXAMINATIONS.** To be recommended for the degree, every student must have passed the required examinations in at least eighty-two semester hours of required courses and have attained therein a minimum weighted average of 67%. A student whose weighted average is not more than one point below 67%, or who has received a failure grade in not more than one subject of the last two years and has attained a minimum weighted average of 70% may be recommended for graduation with his class, and without re-examination by special vote of the Faculty.

**HONORS.** To qualify for honors a student must have met all of the above requirements and in addition thereto have passed his examinations with distinction in all of the courses required for the LL.B. degree. There are two classes of honors:

**CUM LAUDE.** Students who have met all of the requirements for honors and attain a weighted average grade of between eighty-five per cent and ninety-one per cent, both inclusive, will be recommended for the degree, Cum Laude.

**MAGNA CUM LAUDE.** Students who attain a weighted average grade of ninety-two per cent or better will be recommended for the degree, Magna Cum Laude.

## GENERAL INFORMATION REGISTRATION

The filing of an application for admission to the School does not constitute registration. All students, including those entering the School for the first time, are required to register personally at the Law School Office and arrange for the payment of their tuition during the registration period.

Students are urged to register before the opening date whenever it is possible to do so. Registration is not considered as completed, and students are not permitted to attend lectures until they have registered and have paid their tuition and other fees, or have made satisfactory arrangements with the Dean of the School of Law.

\* Due to the accelerated war program, the period of study in the day may be reduced to two years, and in the evening to three years.



## TUITION AND FEES

All checks for tuition and fees should be drawn payable to the order of Northeastern University. The first quarterly payment of tuition and fees is due and payable as a part of the student's registration during the opening week of School. Payments due the University may be made at the School Office, or mailed to Northeastern University School of Law, 47 Mt. Vernon Street, Boston, Massachusetts. The University reserves the right to change tuition rates or fees whenever in their discretion such action is deemed advisable.

**APPLICATION FEE.** The application fee of \$5 must accompany the application for admission and is payable only once on initial entrance to the School. The fee is not refundable. All application fees of students who fail to register because they have entered the armed forces of the United States will be refunded.

**DAY PROGRAM TUITION.** The annual fee for tuition is \$200, payable in four installments of \$50 each. The first installment must be paid before attendance upon lectures.

**EVENING PROGRAM TUITION.** The annual fee for tuition is \$160, payable in four installments of \$40 each. The first installment must be paid during the opening week of School.

The tuition charge for either day or evening students carrying less than a full program, and for all courses in addition to a full program, is at the rate of \$8 for each semester hour.

**UNIVERSITY FEE.** A University fee of 75 cents a semester hour is charged all students each year.

**EXAMINATION FEES.** A student who is given permission to take a regularly scheduled mid-year or final examination in a subject as a re-examination to remove a failure grade must pay a fee of \$5 for each examination so taken. A student who takes a special examination must pay a fee of \$10 for each examination so taken.

**GRADUATION FEES.** A graduation fee of \$10 is charged all candidates for the LL.B. degree, payable on or before May 1 of the year in which they qualify for their degree.

**EXPENSE FOR BOOKS.** The average yearly expense for casebooks, notebooks, and other supplies is \$30. In many instances this expense may be reduced by purchasing used casebooks.

**IN GENERAL.** Students are not permitted to attend lectures until they have registered and have paid their tuition, or have made satisfactory arrangements with the Dean of the School of Law.

No reduction in tuition or fees is made on account of late registration.

Students who cannot meet their tuition payments before the due date should arrange with the Dean for the late payment of their tuition.

The University policy is that each quarterly installment must be paid in full before the student may continue his attendance upon a subsequent quarterly period.

No grades are issued until all financial obligations to the University are discharged.

No student will be advanced in class standing or permitted to re-enroll in the University until all the bills of the previous year have been paid, and no degrees will be conferred upon students who have not paid all their dues to the University. No student will be given honorable dismissal from the School unless he shall have paid all his Law School bills.

A \$2 deferred payment fee will be added to all bills which are not paid by the Saturday following the date on which the payment falls due. Failure to make the required payments on time, or to arrange for such payments, is considered sufficient cause to bar the student from classes until the matter has been adjusted with the Dean.

**WITHDRAWALS AND REFUNDS.** If a student withdraws for good cause from a course and is permitted subsequently to repeat it, he shall be credited with the tuition paid by him. Such credit cannot be applied, however, until the balance due on the course has been paid. This rule does not apply where refund has been made.

In the event a student is obliged to withdraw from the School in which he is enrolled for causes deemed adequate by the Committee on Withdrawals, the balance of the tuition paid will be refunded after the following deductions have been made:

- (a) Four per cent of the total yearly tuition charge shall be deducted for each week of attendance or fraction thereof, in the event of enrollment for a full school year.
- (b) In case the applicant has enrolled for a semester, the deduction shall be made on the basis of ten per cent of the total charge for each week of attendance or fraction thereof.

Attendance is computed from the opening date of the semester until the date of last attendance.

Application, deferred agreement and other fees are not refundable. Diploma charges are exceptions and will be refunded in the case of non-qualification.

No refunds are granted unless the application for withdrawal, together with the request for refund, and supporting data, are filed within forty-five days after the student has ceased attendance.

#### ATTENDANCE

Students are expected to attend with regularity the sessions of all courses in which they are enrolled. Students who are irregular in class attendance without justifiable cause may be dropped from the class rolls or be refused permission to take the final examinations in the course. No student during his attendance at the Law School may be registered in any other school or college, whether of Northeastern University or of any other institution, without the consent of the Dean.

## EXAMINATIONS

1. Examinations are held at the end of each semester. All students must take the mid-year and final examinations in all subjects for which they are registered unless excused by the Dean, who may grant permission to postpone an examination for illness or other imperative cause, or excuse the student's absence from such examination. Postponement will not be granted simply for the convenience of, or because of the lack of preparation by, the student.
2. In case a student is excused from taking a mid-year or final examination, or is permitted to remove a failure by examination, he must take the next regularly scheduled mid-year or final examination in such subject. If the content of the course is changed prior to the giving of the examination which the student takes, the student will be required to prepare himself upon the altered content of the course.
3. A senior who has failed to graduate, and who is eligible to qualify for his degree by subsequent examination, must take the examinations regularly scheduled for the courses in question.
4. A senior who has omitted a mid-year or final examination for justifiable cause properly substantiated, may file with the Dean a written petition requesting permission to take a special examination. If the petition is granted, the time when such special examination is taken shall be at the discretion of the Dean, and a fee of ten dollars will be charged for each examination so taken.
5. The right to take examinations is conditioned upon regular attendance in the subjects. A student may be refused admission to an examination if he has been absent from lectures, or has been habitually unprepared on the regular class assignments, or if any other essential scholastic requirement has not been met.  
No student is permitted to take the final examinations in June if any obligation to the University is due and not discharged.

## PROMOTION

6. A semester hour is one hour of classroom work each week during one semester. The minimum number of semester hours required for promotion and for graduation is established by the faculty.
7. A student's scholastic standing is determined solely by his weighted average calculated upon the grades in all courses elected since entering the school, weighted in accordance with the semester hours devoted to each course.
8. Except as provided in Rule 10, promotion to the second year class in the Day Division and to the second and third year classes in the Evening Division requires a minimum weighted average of 64%. A student is required to have a minimum weighted average of 67% to be entitled to promotion to the senior class.



9. Examinations are marked on a scale of 100. In computing the final grade, the mark received on the examination given at the end of a half-year subject will be the final grade in the course. In the case of a full-year subject, the mark received on the mid-year examination will count as 25%, and the mark received on the final examination at the end of the course as 75% of the final grade in the course, provided, however, that no student shall be given a passing grade for the course unless he shall have received a mark of 60% or better in the final examination. At the end of each semester the student is notified of his letter grade in accordance with the following scale:

A — 90-100

B — 80-89

C — 70-79

D — 60-69 Lowest passing grade.

F — Failure. Failure to be removed as the Faculty shall determine.

Inc. — Postponed examination.

At the end of the school year each student is notified of his weighted average.

#### EXCLUSION AND REINSTATEMENT

10. If a student has a failure grade in one or more courses of the first year of the Day Division, or of the first and second years of the Evening Division, and has an average of 60% to 63%, he may, at the discretion of the faculty, be placed on probation and required to repeat in full or in part the entire year of work. A student who has earned a weighted average of from 64% to 67% may, at the discretion of the faculty, be permitted to enter the senior class on probation to carry such a program of courses as the faculty shall require. If the student fails to present evidence which would tend to justify the belief that he has the ability to succeed in the law, he shall be excluded from the school.
11. A student who receives a weighted average below 60% in the courses of the first year in the Day Division, or in the first and second years in the Evening Division, shall be excluded from the school. A student whose weighted average at the end of the Junior year is below 64% shall be excluded from the school. Students excluded under Rules 10 and 11 may petition the Dean in writing not later than September 1 for permission to appear before the Faculty Committee to show reason why they should be reinstated. If reinstated the student is not thereby relieved from the necessity of attaining, at the following spring examination period, the average required that year for promotion or graduation.
12. A student who fails a second time to attain the required average is permanently excluded or denied graduation.
13. Provided he has not been previously excluded under Rules 10, 11, and 12 a senior who fails to graduate with his class may, by vote of the faculty, be permitted to continue in the school or to qualify for his



degree by raising his average to at least 67% under such conditions as the faculty may prescribe. Examinations taken must be those regularly offered in course and they must be taken on the dates regularly scheduled for them as provided in Rule 3. The last examination grades received are used in computing such student's new average and his earlier grades in the courses in question are disregarded. The period during which he may thus qualify for his degree shall not extend beyond the second spring examination next following June of his senior year.

### DISCIPLINE

Attendance at the University is a privilege and not a right. The Faculty Committee reserves to itself the right to require the withdrawal of any student at any time whom it may deem unworthy either on account of his neglect of study, his incapacity for the law, or for any grave defect of conduct or character, and no reason for requiring such withdrawal need be given.

### LIBRARY

The Law School library is located in the Law School building, is well lighted and furnished and easily accessible. It contains more than 14,000 volumes and is steadily growing. The library is so arranged as to give the student direct access to the books in the stacks as well as in the reading room. The library contains many of the State Reports, the complete National Reporter System, the Federal Reports, and Reports of the Supreme Court of the United States, the English Reports, Dominion Law Reports, English and American Digests, various State Digests and Statutes, and an extensive collection of encyclopedias, annotations, treatises, legal periodicals, approved textbooks, and all current casebooks.

The library is open weekdays from 8:45 a.m. to 9:00 p.m.; Sundays from 3:00 p.m. to 8:00 p.m.; and holidays from 12:00 m. to 6:00 p.m.

### GENERAL NOTICE

The hours of instruction, casebooks used, subjects taught, degree requirements, and like matters are subject to change at the discretion of the Dean and the Faculty Committee, but there will be no change in charges for tuition, or any other major change, during the school year for which a student has registered.

### SCHOLARSHIPS AND PRIZES

#### LAW SCHOOL HONOR SCHOLARSHIPS

Northeastern University has created within the School of Law the following scholarships:

1. A \$50 scholarship shall be awarded to the member of each of the first and second year classes in the Day Division, and to each of the first, second and third year classes in the Evening Division, who receives the highest scholastic average for the year provided he re-enrolls for the next year.

2. Two \$25 scholarships shall be awarded to the two members in each of the first and second year classes in the Day Division, and to the two members of the first, second and third year classes in the Evening Division, ranking next in honor to the student receiving the \$50 award, provided in each instance the student re-enrolls for the next year.

In the event that a student qualifying for one of the above scholarship awards does not re-enroll, the next highest ranking student in his class shall receive the award.

#### SCHOLARSHIPS FOR COLLEGE GRADUATES

A limited number of special scholarships have been established for college graduates. Awards will be made on the recommendation of the Dean and will be upon the basis of the applicant's financial need, character and scholastic attainments. These scholarships range from \$25 to \$35 per year.

Such scholarships will not be awarded to a student who is on probation or has a failure in any subject in this School.

Written application for college scholarships must be filed on or before the time of registration.

All applications must disclose in detail the amount and source of the applicant's income. These scholarships will be awarded for the year in September. One-quarter of the amount of the scholarship award is deducted from the tuition of each quarterly payment.

#### THE KAPPA DELTA KAPPA SCHOLARSHIP

A scholarship gift to be awarded annually to the member of the Sophomore class, who, in the opinion of the administrative officers of the School, has through his personality, character, conduct, service and scholarship made the greatest contribution to the School. This award is to be made only in the event the student returns for his Junior year.

#### BENJAMIN GINSBERG MEMORIAL SCHOLARSHIP

A fund by the Upsilon Delta Sigma Fraternity to establish a scholarship in memory of Benjamin Ginsberg of the Class of 1927. The scholarship is to be awarded annually to the highest ranking student of the Sophomore class.

#### SIGMA TAU EPSILON FUND

A fund of \$100, the income to be used to purchase a prize in the form of a book to be presented to the student whose grades rank the highest in the Freshman year. The student is to be presented with this prize only in the event he re-enrolls for his Sophomore year.

#### THE GAMMA KAPPA NU SCHOLARSHIP FUND

A fund of \$800, the income to be used as a scholarship gift in the form of the first installment of tuition in the Senior year.

This scholarship gift "shall be presented annually to that woman in the

Junior class who has done the most for the School and has also maintained a high scholarship in her studies, and provided that she registers for her Senior year."

#### PHI PI CHI SCHOLARSHIP

A fund, the income of which is to be used to purchase a prize in the form of a law book, to be presented to the student whose grades rank among the first ten on the Dean's list in the Freshman year.

The Executive Council of the Chapter in conjunction with the Faculty Adviser shall select the student. Presentation is to be made only in the event that the student enrolls for his Sophomore year.

#### PHI EPSILON NU SORORITY

The Phi Epsilon Nu Sorority will present a Law Dictionary to the Junior woman student, in the Day or Evening Division, who attained the highest scholastic average in the Sophomore class while carrying a complete and regular course.

## DEGREES CONFERRED IN 1941

## BACHELOR OF LAWS

HAROLD ARTHUR ABRAMSON  
GEORGE HENRY ANTHONY  
EDWARD FRANCIS APPLETON  
GEORGE FRANCIS ARCHAMBAULT  
PHILIP ALAN ARNOLD  
WILLIAM LAWRENCE BARRETT  
MARY DOROTHY BARRON  
J. JOHN BERGER  
RAYMOND EDWARD BERNARD  
WILLIAM CHANNING BEUCLER  
DANA PHILIP BLAKE  
ARTHUR LEO BOLES  
FRANK VICTOR BONZAGNI  
JOHN LEROY BROWN  
JOSEPHINE BRUSCHETTE  
WALTER LINN BURNS, III  
MABEL RUTH CAMERON  
ARTHUR ABRAHAM CARMELL  
MARY ANNA CHIULLI  
LESLIE CHURCH  
HELEN CECILIA COFSKY  
MITCHELL GEORGE CONDOS  
JOHN MYATT CORCORAN  
JOHN EDWARD F. CORSCADDEN  
PETER TOUFIK COURY  
JOHN JOSEPH CRONIN  
PAUL JOHN CRONIN  
JOHN VIVIAN DANIEL  
BERTIE M. D'ARCANGELO  
SYDNEY MAURICE DAVIS  
MARION LOUISE DEVINE  
WILLIAM DIMARZIO  
MARY CATHERINE DONAHUE  
RAYMOND MICHAEL DONOVAN, JR.  
RUSSELL BENJAMIN DONOVAN  
FRANK J. DOWD, JR.  
INA MARY DOWNS  
KATHLEEN ANNE DOYLE  
FRANK JACOB FARIN  
RALPH WEBSTER FARRIS, JR.  
JANE FRANCES FERREN  
JOHN FREDERICK FINN  
JOHN EDWARD FINNEGAN, JR.  
BERTRAM ABEL FLOWER  
CHRISTOPHER CECIL FORD  
SAMUEL JOSEPH FOTI  
FRANCIS JOHN GALLANT  
ROBERT HENRY GAUGHEN  
MARSHALL MARCELLO GENTILE  
ALEXANDER JOHN GILLIS

MORRIS GILLMAN  
BENJAMIN ALLEN GLOSBAUD  
WILLIAM FRANCIS GLOSSA  
LEO GOLUB  
CHESTER JOSEPH GRASEWICZ  
MICHAEL JOSEPH GREALY  
DEBORAH GREENBERG  
MIRIAM GROSSMAN  
GEORGE HADDAD  
HERBERT MILTON HAINER, JR.  
MARTIN HENRY HALABIAN  
ELIZABETH WILMA HALLIDAY  
HOWARD FRANCIS HALLION  
JOHN JOSEPH HAYES  
JOHN JOSEPH HESSELSCHWERDT  
CHARLES FRANCIS HILLY, JR.  
GEORGE LEE HOAR  
FRED LEONARD HOFFSTEIN  
NICHOLAS PETER HOLLIS  
IVAN KENNETH HOYT  
NICHOLAS JOHN IANNELLI  
CLAYTON GRANT JAMESON  
FRANK JOSEPH JENCUNAS  
JOHN ELMER JOHNSON  
ROBERT RUMSEY JOHNSON  
VICTOR DAVID JOHNSON  
MORRIS KARLL  
THEODORE KARLSBERG  
CORNELIUS FRANCIS KIERNAN  
LEO KLYMAN  
ARTHUR NICHOLAS KOULOPOLOS  
ALBERT KRAMER  
JOSEPH KRINSKY  
THEODORE HENRY KUTNEY  
WILLIAM SHERMAN LACKEY  
WILLIAM FRANCIS LALLY  
THOMAS FRANCIS LARKIN  
SALVATORE LAROSA  
JAMES EDMUND LEARY  
LYMAN CARTER LEE  
WILLIAM FRANCIS LENIHAN  
HYMEN LIBER  
CHARLES JOSEPH LIGOTTI  
HAROLD RICHARD LINDBERG  
FLORENCE MAE LOMBARD  
MARIANO JOAQUIN LORENTE  
JAMES EDWARD LYDON  
ROBERT LEONARD MABON  
RITA CLAIRE MACDONOUGH  
WILLIAM PARKES MADDEN



RALPH COLLINS MAHAR  
 SAMUEL MARSHALL  
 LEONARD LAWRENCE MATTHEWS  
 PATRICK ALOYSIUS MCCARTHY, JR.  
 GRACE DOROTHEA MCDADE  
 THOMAS LAWRENCE MCDERMOTT  
 FRED DUNCAN MCFARLAND  
 JOSEPH CHRISTOPHER MCINERNEY  
 VINCENT BERNARD MEADE  
 EDGAR HENRI MILOT  
 HAIG JOHN MINASIAN  
 ROBERT SOLOMON MITCHELL  
 ROBERT LESLIE MOLLIKA  
 EVA REBECCA MONSEIN  
 SAMUEL ALBERT MORETSKY  
 DORIS ANITA MORONG  
 FERRIS MASSED MOSES  
 PETER JAMES MURPHY  
 THOMAS BARRETT MURPHY  
 JOHN ALBERT NELSON  
 WILLIAM FRANCIS NICHOLSON  
 ROBERT NORMAN NIELSEN  
 CARL BULKELEY NORRIS  
 EDWARD FRITZROY NOVICK  
 EDMUND JOSEPH O'BRIEN  
 NICHOLAS ANTHONY O'BRIEN, JR.  
 CHARLES THOMAS O'LEARY  
 MARIE ELIZABETH OLSON  
 CHARLES BATCHELDER ORCUTT  
 NATHAN JACOB PRANSKY  
 JAMES MARTIN REED  
 LEON RICE  
 GEORGE RANDOLPH RICHARDSON  
 FRANCIS LEO RISPIN  
 FREDERICK WESLEY ROGERS  
 CORNELIUS RICHARD ROSDAHL  
 MAX JAMES ROSENBERG  
 ROBERT CAMPBELL ROURKE  
 BERNARD RUBBINS  
 JOHN FRANCIS RYAN  
 THOMAS ROBERT SAAD

JOHN JOSEPH SALMON  
 RICHARD STEWART SANDERSON  
 IRVING SAROTA  
 ROBERT FUNSTON SAWALLIS  
 ROLAND SEGALINI  
 IRVING HOWARD SERONICK  
 BERNARD FRANCIS SHADRAWY  
 JOHN MANSUR SHADRAWY  
 PHILIP EDWARD SHEEHAN  
 GORDON ADDISON SHERWIN  
 HYMAN SHOLIN  
 FRANCIS HENRY SLOAN  
 HAROLD SOLOMON SPECTOR  
 LEWIS EMERY SPRINGER, JR.  
 HARRY STILLMAN  
 PHILIP JOHN STONE  
 JOSEPH DENNIS SULLIVAN  
 EDWARD SWARTZ  
 RUTH ALICE THOMAS  
 GEORGE HAWLEY THOMPSON  
 JOHN GILLMAN TIGHE  
 ROBERT EDWARD TIVNAN  
 ANTHONY SAMUEL JOSEPH TOMASELLO  
 EDNA ANGELA TOSI  
 RICHARD AARON TUTTLE  
 WILLIAM DAVID TWOHIG  
 WARREN MORRIS VANDERBURGH  
 DAVID TOBIN VERSTÄNDIG  
 HARRY WALTER VOZELLA  
 EDMUND CORBETT WALSH  
 GEORGE WILLIAM WARD  
 WARREN ALEXANDER WATSON  
 WILLIAM FLOYD WAY  
 SHIRLEE ESTELLE WEINBERGER  
 ABRAHAM WEKSTEIN  
 SIDNEY GENE WELANS  
 FRANK BERNHARD WELIN  
 LAURENCE RUTHERFORD WINCHESTER  
 JOHN HARRY WOLLENHAUPT  
 FRANK HOLDEN WOOLWAY

### *Cum Laude*

JOHN LENZ ARNOLD  
 WALTER WILSON BALDWIN  
 MARTIN WILLIAM COHEN  
 EDWARD FRANCIS DOYLE  
 RICHARD SLOANE FOLGER  
 ERNEST LEMUEL GISSLER, JR.  
 ROLAND FREDERICK HALLETT  
 BERNARD HARMON  
 MILDRED JOHNSON HUNTER

HAROLD MILLAR LAWSON  
 CARL VICTOR LINDSTROM  
 ALBERT JOSEPH LUFTMAN  
 JOHN AUSTIN MACOMBER  
 ERNEST ABNER NORMAN  
 MELVIN IRVING SHAPIRO  
 GEORGE SHAKESPEARE VASIL  
 FREDERICK HERMAN WALTER

## MASTER OF LAWS

JOSEPH FORD

JOSEPH JOHN MONAGHAN

## DEGREES AWARDED OUT OF COURSE

DOROTHY EDITH ACKLES  
GEORGE CLIFFORD AMBROSE  
ROBERT EDMUND BARRY  
RODNEY AUGUSTUS BENNETT  
JOHN FRANCIS DARGIN, JR.  
ANTHONY JOSEPH DiBUONO  
SAUL FREEDMAN  
JOHN FRANCIS HEALY

WILLIAM EDWARD HOGAN  
LLOYD TREVOR HORTON  
JOHN FREDERIC KEELER  
ROBERT LEONARD MOORE  
PHILIP JOSEPH SULLIVAN  
SAUL WEISMAN  
JOHN ROLAND WOLFF

CERTIFICATE OF COMPLETION  
AWARDED OUT OF COURSE

WILLIAM FRANCIS HARRINGTON

# NORTHEASTERN UNIVERSITY

## COLLEGE OF LIBERAL ARTS

Offers a broad program of college subjects serving as a foundation for the understanding of modern culture, social relations, and technical achievement. Varied opportunities available for vocational specialization. Degree: Bachelor of Science or Bachelor of Arts.

## COLLEGE OF ENGINEERING

Offers curricula in Civil, Mechanical (with Air-Conditioning and Aeronautical options), Electrical, Chemical, and Industrial Engineering. Classroom study is supplemented by experiment and research in well-equipped laboratories. Degree: Bachelor of Science in the professional field of specialization.

## COLLEGE OF BUSINESS ADMINISTRATION

Offers three curricula: Accounting, Marketing and Advertising, Industrial Administration. Each curriculum represents in itself a broad survey of business technique, differing from the others chiefly in emphasis. Degree: Bachelor of Science in Business Administration.

---

## SCHOOL OF LAW

Offers day and evening undergraduate programs admitting those who present a minimum of one-half of the work accepted for a Bachelor's degree in an approved college or its full equivalent, each program leading to the degree of Bachelor of Laws. Coeducational.

## SCHOOL OF BUSINESS

Offers curricula through evening classes leading to the degree of Bachelor of Business Administration with appropriate specification in Accounting, Management (with Industrial and Merchandising options), and Engineering and Business or the degree of Bachelor of Commercial Science in Law and Business Management. Preparation for C.P.A. examinations. Shorter programs arranged to meet special needs. Coeducational.

## EVENING COURSES OF THE COLLEGE OF LIBERAL ARTS

Certain courses of the College of Liberal Arts are offered during evening hours affording concentration in Economics, English, History and Government, or Social Science. A special program preparing for admission to the School of Law is also available. The program is equivalent in hours to one-half the requirement for the A.B. or S.B. degree. Associate in Arts title conferred. Coeducational.

---

The Colleges of Liberal Arts, Engineering, and Business Administration offer day programs for men only and are conducted on the cooperative plan. After the freshman year students may alternate their periods of study with periods of work in the employ of business or industrial concerns at ten-week intervals. Under this plan they gain valuable experience and earn a large part of their college expenses.

---

In addition to the above schools the University has affiliated with it and conducts: the Lincoln Technical Institute, offering, through evening classes, courses of college grade in various fields of engineering leading to the title of Associate in Engineering; and the Lincoln Preparatory School, an accredited evening school preparing for college entrance and offering other standard high school programs.

---

For further information regarding any of the above schools, address

## NORTHEASTERN UNIVERSITY

*Law School*

47 MT. VERNON STREET

*Other Schools*

360 HUNTINGTON AVENUE

BOSTON, MASSACHUSETTS

Telephone: Kenmore 5800







**NORTHEASTERN UNIVERSITY**

**YEAR**

**BOSTON**

**1942-1943**

**SCHOOL OF BUSINESS**

**EVENING SESSIONS**

## Office Hours

TO JUNE 15, 1942

Daily (*except Saturdays and Sundays*), 8:45 A.M.—5:00 P.M.; 5:30 P.M.—8:30 P.M.

Saturdays, 8:45 A.M.—1:00 P.M.

JUNE 16, 1942 — AUGUST 14, 1942

Daily (*except Saturdays and Sundays*), 8:45 A.M.—5:00 P.M.

Saturdays, 9:00 A.M.—12:00 NOON.

AUGUST 17, 1942 — JUNE 21, 1943

Daily (*except Saturdays and Sundays*), 8:45 A.M.—5:00 P.M.; 5:30 P.M.—8:30 P.M.

Saturdays, 8:45 A.M.—12:00 NOON through September 5.

8:45 A.M.— 4:00 P.M. September 12, 19, and 26.

8:45 A.M.— 1:00 P.M. October 3—June 19.

## Gifts and Bequests

Northeastern University will welcome gifts and bequests for the following purposes:

- (a) For its building program.
- (b) For general endowment.
- (c) For specific purposes which may especially appeal to the donor.

It is suggested that, when possible, those contemplating gifts or bequests confer with the President of the University regarding the University's needs before legal papers are drawn.

Gifts and bequests should be made only in the University's legal name, which is "Northeastern University."

*Address Communications to*

NORTHEASTERN UNIVERSITY  
SCHOOL OF BUSINESS

360 HUNTINGTON AVENUE, BOSTON, MASS.

TELEPHONE: KENMORE 5800

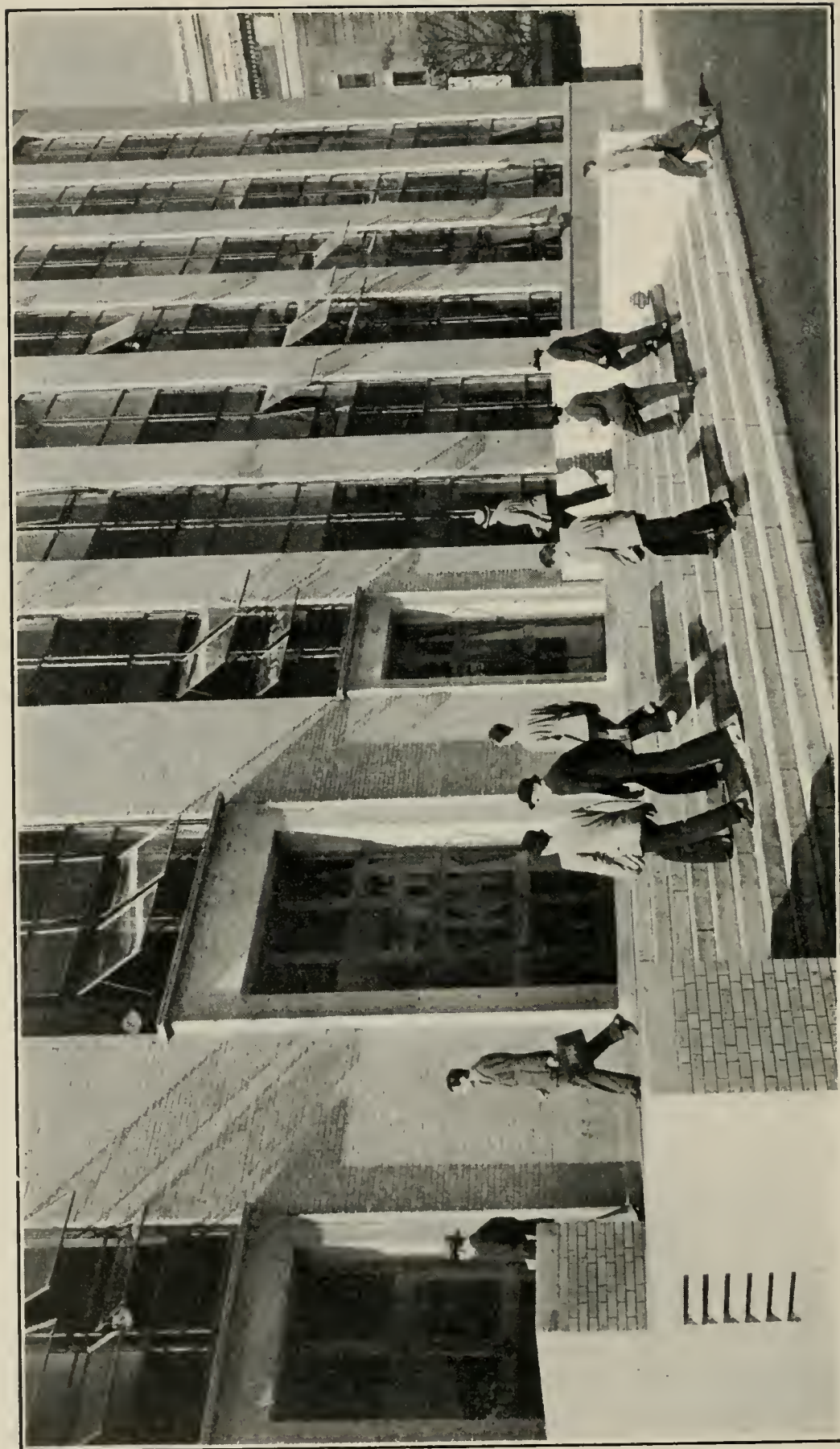
NORTHEASTERN UNIVERSITY  
EVENING DIVISION  
SCHOOL OF BUSINESS



35th Year  
1942-1943

{ The University is located at  
the entrance to the Huntington  
Avenue subway within nine  
minutes of Park Street and  
easily accessible from all points. }

A DISTINCTIVE SCHOOL OF BUSINESS  
*providing opportunities for men and women to receive advanced training  
in Business during convenient Evening Hours*



RICHARDS HALL



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# Northeastern University

## *Administrative Organization*

### The Northeastern University Corporation

ROBERT GRAY DODGE  
*Chairman*

FRANK LINCOLN RICHARDSON  
*Vice-Chairman*

CARL STEPHENS ELL  
*President of the University*

GALEN DAVID LIGHT  
*Secretary and Treasurer*

JOSEPH FLORENCE ABBOTT  
CHARLES FRANCIS ADAMS  
WILMAN EDWARD ADAMS  
ROGER AMORY  
HENRY NATHANIEL ANDREWS  
ROBERT BALDWIN  
ARTHUR ATWOOD BALLANTINE  
GEORGE LOUIS BARNES  
THOMAS PRINCE BEAL  
FARWELL GREGG BEMIS  
HENRY GODDARD BRADLEE  
GEORGE ARTHUR BURNHAM  
GODFREY LOWELL CABOT  
PAUL CODMAN CABOT  
WINTHROP L. CARTER  
WALTER CHANNING  
WILLIAM CONVERSE CHICK  
EVERETT AVERY CHURCHILL  
PAUL FOSTER CLARK  
SEARS B. CONDIT  
ALBERT MORTON CREIGHTON  
ERNEST BLANEY DANE  
WILLIAM JAMES DAVIDSON  
JAMES DEAN  
PAUL AUGUSTUS DRAPER  
CHARLES FRANCIS EATON  
WILLIAM PARTRIDGE ELLISON  
JOSEPH BUELL ELY  
JOHN WELLS FARLEY  
FREDERIC HAROLD FAY  
ALLAN FORBES  
EDWARD J. FROST  
FRANKLIN WILE GANSE  
HARVEY DOW GIBSON  
MERRILL GRISWOLD  
HENRY INGRAHAM HARRIMAN  
CHANDLER HOVEY  
WESTON HOWLAND  
HOWARD MUNSON HUBBARD  
MAYNARD HUTCHINSON  
ARTHUR STODDARD JOHNSON

FRANK HOWARD LAHEY  
HALFDAN LEE  
EDWARD ABBOTT MACMASTER  
JOHN RUSSELL MACOMBER  
GEORGE ARTHUR MALLION  
JOSEPH PATRICK MANNING  
ALBERT EDWARD MARSHALL  
HAROLD FRANCIS MASON  
JAMES FRANKLIN McELWAIN  
HUGH DEAN McLELLAN  
FRED LESTER MORGAN  
IRVING EDWIN MOULTROP  
CLARENCE LUCIAN NEWTON  
OLAF OLSEN  
AUGUSTIN HAMILTON PARKER, JR.  
GEORGE EDWIN PIERCE  
ROGER PIERCE  
MATTHEW POROSKY  
FREDERICK SANFORD PRATT  
ROGER PRESTON  
HARRY WENDELL PROUT  
SIDNEY RABINOVITZ  
STUART CRAIG RAND  
JAMES LORIN RICHARDS  
CHARLES MILTON ROGERSON  
ROBERT BILLINGS RUGG  
LEVERETT SALTONSTALL  
RUSSELL MARYLAND SANDERS  
FRANK PALMER SPEARE  
RUSSELL HENRY STAFFORD  
FRANCIS ROBERT CARNEGIE STEELE  
CHARLES STETSON  
EARL PLACE STEVENSON  
ROBERT TREAT PAINE STORER  
FRANK HORACE STUART  
EDWARD WATSON SUPPLE  
MAHLON EDWARD TRAYLOR  
ELIOT WADSWORTH  
EUSTIS WALCOTT  
EDWIN SIBLEY WEBSTER  
SINCLAIR WEEKS

# Northeastern University

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## General University Committees

---

### Executive Council

CARL STEPHENS ELL, *Chairman*  
EVERETT AVERY CHURCHILL                      GALEN DAVID LIGHT

### University Cabinet

CARL STEPHENS ELL, *Chairman*

EVERETT AVERY CHURCHILL	EDWARD SNOW PARSONS
WILLIAM THOMAS CLONEY, JR.	JOHN BUTLER PUGSLEY
CHARLES WILLIAM HAVICE	CHARLES HENRY SAMPSON
ASA SMALLIDGE KNOWLES	MILTON JOHN SCHLAGENHAUF
WILFRED STANLEY LAKE	SYDNEY KENNETH SKOLFIELD
JAMES WALLACE LEES	EBEN OSWELL SMITH
GALEN DAVID LIGHT	J. KENNETH STEVENSON
HAROLD WESLEY MELVIN	WILLIAM CROMBIE WHITE
WINTHROP ELIOT NIGHTINGALE	RUSSELL WHITNEY
FRANK GIVEN AVERILL, <i>Secretary</i>	

### Administrative Committee

EVERETT AVERY CHURCHILL, *Chairman*

FRANK GIVEN AVERILL	WILLIAM CROMBIE WHITE
GALEN DAVID LIGHT	RUSSELL WHITNEY

### Library Committee

EVERETT AVERY CHURCHILL, *Chairman*

ASA SMALLIDGE KNOWLES	WILLIAM CROMBIE WHITE
WILFRED STANLEY LAKE	RUSSELL WHITNEY
MYRA WHITE	

## Divisional Committees

### Springfield Division

*Board of Governors*

ROBERT RICHARDSON EMERSON, *Chairman*  
STANLEY OSCAR SMITH, *Vice Chairman*

JOHN DOANE CHURCHILL	CHARLES ERNEST LEE
ROE SIDNEY CLARK	EARL HENRY PAINE
HARLEY BAKER GOODRICH	GEORGE WILLIAM RICE, JR.
BLAKE ALEXANDER HOOVER	HORACE JACOBS RICE
GEORGE EMERY WILLIAMSON	

### Providence Division

*Y. M. C. A. Schools Committee*  
ERNEST IRONS KILCUP, *Chairman*

RICHARD DAY ALLEN	SAMUEL CAMPBELL MOORE
JOHN EDWARD CANDELET	CHESTER TOTTEM MOREY
WILLIAM COVELL ELLIS	WILLIAM WASHBURN MOSS
LUTHER NEWTON HAYES	GREN OREN PIERREL
PAUL REVERE LADD	SHERMAN LEWIS SMITH

# NORTHEASTERN UNIVERSITY AND AFFILIATED SCHOOLS

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## *Statistical Summary — 1940-1941*

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	<i>Administrative and Instructional Staff</i>	<i>Enroll- ment</i>
General Administration	9	
Northeastern University		
College of Liberal Arts		
Day	74	503
Evening	11	118
College of Engineering	99	1,500
College of Business Administration	58	664
School of Business	111*	1,599*
School of Law	41*	947*
Affiliated Schools		
Lincoln Technical Institute	42	715
Lincoln Preparatory School	30	428
Huntington Day School for Boys	16	146
Huntington Summer School	10	138
Miscellaneous Courses		
Civilian Pilot Training Program	4	94
Engineering Defense Training Program	39	742
Total	544	7,594
Less Duplicates	199	522
	345	7,072

---

\*These figures include the administrative officers, faculties, and students of the Divisions of the University in Worcester, Springfield, and Providence.



# School of Business

## Calendar

Class sessions which fall on holidays are made up at the end of the course or as announced.

### 1942

September	1- 8	Examinations for Removal of Conditions and Advanced Standing in Springfield.
September	7	Legal holiday (no classes).
September	8-11	Examinations for Removal of Conditions and Advanced Standing in Boston and Providence.
September	8-14	Upper classes begin in Springfield.* English 7, 8 Reports due.
September	14-18	Upper classes begin in Boston and Providence.* English 7, 8 Reports due.
September	21-25	Freshmen classes begin in Boston and the Divisions.
October	12	Legal holiday (no classes in Massachusetts).
November	11	Legal holiday (no classes).
November	26	Thanksgiving Day — Legal holiday (no classes).
December	18	Last class session before Christmas recess in Springfield and Providence.
December	23	Last class session before Christmas recess in Boston.

### 1943

January	4	First class session after Christmas recess in Boston and the Divisions.
January	18-22	Second semester classes begin in Boston and Providence.
February	22	Legal holiday (no classes).
March	15	Last date for the submission of theses.
April	19	Legal holiday (no classes in Massachusetts).
May	1	Last date for filing application for Degrees and for the payment of the graduation fee.
May	3-28	Final examination period.
May	31	Legal holiday (no classes).
June	6	Baccalaureate Services at Springfield.
June	9	Commencement Exercises at Springfield.
June	13	Baccalaureate Services at Providence.
June	18	Commencement Exercises at Providence.
		Baccalaureate Services at Boston (date to be announced).
		Commencement Exercises at Boston (date to be announced).

\*Students must register before attending classes. See page 55 for late registration.

# Northeastern University

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## *General Statement*

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**N**ORTHEASTERN UNIVERSITY is incorporated as a philanthropic institution under the General Laws of Massachusetts. The State Legislature, by special enactment, has given the University general degree granting powers.

The Corporation of Northeastern University consists of men who occupy responsible positions in business and the professions. This Corporation elects from its membership a Board of Trustees in whom the control of the institution is vested. The Board of Trustees has four standing committees: (a) an Executive Committee which serves as an Ad Interim Committee between the regular meetings of the Board of Trustees and has general supervision of the financial and educational policies of the University; (b) a Committee on Housing which has general supervision over the buildings and equipment of the University; (c) a Committee on Funds and Investments which has the responsibility of administering the funds of the University; (d) a Development Committee which is concerned with furthering the development plans of the University.

Founded in 1898, Northeastern University, from the outset, had as its dominant purpose the discovery of human and social needs and the meeting of these needs in distinctive and highly serviceable ways. While subscribing to the most progressive educational thought and practice, the University has not duplicated the programs of other institutions but has sought "to bring education more directly into the service of human needs."

With respect to program, Northeastern has limited itself:

- To offering, in its several schools, basic curricula from which non-essentials have been eliminated;
- To effective teaching;
- To advising and guiding students;
- To giving students the chance to build well-rounded personalities through a balanced program of extra-curricular activities.

The Northeastern Plan of Education is especially designed for the student who must earn while he learns. In the main, it consists of two definite types of education:

- Co-operative Education by Day,
- Adult Education by Night.

The plan has been developed in such a way that experience in jobs with pay is utilized to help boys of limited financial resources secure an education and at the same time gain the maximum educational benefit from their practical experience. So far as the New England States are concerned, Northeastern University is the only institution whose day colleges, other than the School of Law, are conducted under the Co-operative Plan.

The several schools and programs of the University are operated either under the name "Northeastern University" or by its affiliated schools, the Lincoln Schools, and The Huntington Day School for Boys. The following is a brief outline of the principal types of educational opportunities offered.

In the field of Co operative Education there are three day colleges—the College of Liberal Arts, the College of Engineering, and the College of Business Administration. All of these colleges offer five-year curricula. The College of Liberal Arts offers majors in the usual fields of the arts and the sciences leading to the degrees of Bachelor of Arts and Bachelor of Science. The College of Engineering, one of the largest engineering colleges in the United States, has curricula in Civil, Mechanical (with Air-Conditioning and Aeronautical options), Electrical, Chemical, and Industrial Engineering. The College of Business Administration has curricula in Accounting, Banking and Finance, Marketing and Advertising, Journalism, Public Administration, and Industrial Administration. The College of Engineering and the College of Business Administration confer the degree of Bachelor of Science with specification indicating the field of specialization. The Co-operative Plan, under which all of these day colleges operate, enables the student to alternate regular periods of classroom instruction with supervised employment in an industrial or commercial position, thus combining theory and practice in an exceedingly effective manner. Apart from the educational advantages of the Co-operative Plan is the opportunity for self-support while the student is pursuing his studies at Northeastern University. During the co-operative periods, students not only gain experience but are also paid for their services. Approximately three hundred business and industrial concerns co-operate with Northeastern University in making this program effective.

The School of Law conducts both a day and an evening undergraduate program which prepares for admission to the bar and for the practice of the law and leads to the degree of Bachelor of Laws.

The Adult Education Program has been developed in the evening work of the School of Law as indicated above, in the School of Business, and in the evening courses of the College of Liberal Arts. The School of Business has curricula in Management — with Industrial and Merchandising majors — Accounting, Law and Business Management, and Engineering and Business. This School awards the Bachelor of Business Administration degree with specification and the Bachelor of Commercial Science degree in Law and Business Management. The College of Liberal Arts offers certain of its courses during evening hours constituting a program, three years in length, equivalent in hours to one-half the requirements for the A.B. or S.B. degree, and providing a general education and preparation for admission to the School of Law. The title of Associate in Arts is conferred upon those who complete this program.

Northeastern University operates divisions of the School of Business in co-operation with the Young Men's Christian Associations in Springfield and Providence, in order that larger groups of men and women might be served through its evening schools. With the establishment of the divisions, thoroughgoing methods of supervision were instituted and have been consistently followed and improved, with the result that the divisional work is conducted upon a highly efficient basis.

The Adult Education Program has also been developed through the Lincoln Schools, which are affiliated with and conducted by Northeastern University. The classes in these schools are held at convenient evening hours. The Lincoln Technical Institute offers curricula upon a college level in various phases of engineering leading to the title of Associate in Engineer-



ing; whereas the Lincoln Preparatory School, accredited by the New England College Entrance Certificate Board, prepares students for admission to college and offers other standard high school programs.

The Huntington Day School for Boys, also affiliated with and conducted by Northeastern University, is the outgrowth of a demand in the city of Boston for an urban preparatory school with high educational standards which would furnish thorough preparation for admission to the leading colleges and universities. While easily accessible to the various sections of Boston and to the suburbs, it has the facilities of a country day school and offers a country day school program. This School is one of the leading preparatory schools of the country.

## **Location of University Buildings**

Northeastern University is located in Boston, a city which is rich in educational and cultural opportunities. The University center is on Huntington Avenue just beyond Massachusetts Avenue and opposite the Boston Opera House. Here on an eight acre campus are located the educational buildings of the University except that of the School of Law. The classes of the Evening School of Business are all held at the University center on Huntington Avenue.

### **Richards Hall**

Richards Hall, a four-story building at 360 Huntington Avenue, contains over one hundred thousand square feet of floor space devoted to administrative and instructional purposes. On the first floor are the general administrative offices of the University. The University bookstore, the "Husky Hut" and the student checkroom are located in the basement. On the various floors are three large lecture halls and numerous classrooms and laboratories. The offices of the Evening Division are located on the first floor.

### **New Building**

This building, completed and occupied in November, 1941, contains forty-two thousand square feet of floor space. Here are located the Chemical Engineering and Biological laboratories, a large commons room open to day and evening students, and eighteen classrooms and lecture halls.

### **East Building**

This building contains the University library, classrooms, and certain laboratories.

### **South Building**

The South Building of the University contains certain laboratories, a large lecture hall, and several classrooms.



### Beacon Hill Building

The Beacon Hill Building, occupied exclusively by the School of Law, is located at 47 Mt. Vernon Street, within sight of the State House and contains administrative offices, a library, classrooms, student lounges, and other facilities.

### Transportation

The University center is easily reached from the various railroad stations and from all points on the Boston Elevated System by the new rapid transit Huntington Avenue subway. Ample parking space is available in the rear of Richards Hall.

### Springfield Division

Northeastern University, Springfield Division, is located two streets east of Main on Chestnut, corner of Hillman — a three-minute walk from Main via Hillman. It is reached from the Union Station by a five-minute walk south along Dwight to Hillman to Chestnut; and a three-minute walk north along Chestnut from the Public Library on State Street.

### Providence Division

The Providence Division is located in the Y.M.C.A. Building at 160 Broad Street. This location is about an eight-minute walk from the center of the city. Adequate parking facilities are available for automobiles. The following car and bus lines pass the building: Broad Street, Elmwood Avenue, Reservoir Avenue, Pontiac Avenue, Auburn and Eden Park, and East Greenwich.



*A class in Distribution, relating sales problems and methods, conducts its own sales demonstration*

# School of Business

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## *The Background of an Institution*

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**T**HIRTY-FIVE YEARS ago, in March of 1907, the first undergraduate evening school of business in New England was organized. This was the beginning of Northeastern University School of Business, a pioneer endeavor to bridge an existing gap in business and professional education. Four years later, the School was authorized by the Massachusetts Legislature to grant university degrees to its graduates.

### Purpose

Now, just as at the start, the school seeks first to determine what business needs in its personnel, and then to supply properly trained men and women who can fulfill those needs.

The training of a student at Northeastern has always been conducted so that a graduate receives not only a B.B.A. or a B.C.S. degree, but an immediately applicable vocational training equipping him to fill a better position in some one business activity. For his future, he has the advantage of a thorough background of business methods and an appreciation of the problems of management, which, if properly used, may lead to advancement and executive responsibilities.

Such a well-rounded preparation also enables a Northeastern graduate to achieve the higher social standing enjoyed by college and university graduates.

### Administrative Policy

The School of Business was founded to serve those who have only evening hours free for study — a special field, limited to the education of the person who has permanently left day school and gone to work. The Northeastern University evening student is an adult, usually more mature than the student of a day school. He is in direct touch with business and is expected to take an active part in his own supervised training. The constant effort of the administrative and teaching staff is toward more effective means of suiting their educational service to the individual evening student.

A program carefully adapted to the needs of the student, and the proper guidance of his time and effort in class group and study, call for high standards in administration. The administrative officers of Northeastern University function solely to help the student get the most value from his course of training. The Dean of the School, the Educational Directors in the Divisions at Springfield and Providence, the Registrars and other officers are available at all times to assist students. Those who desire any sort of advice or guidance in any part of their school work will find the officers of the School always ready to do their utmost.

### Methods of Instruction

Because the evening student is daily in contact with business, his training logically should be in actual business problems. The School's instruction in nearly all courses is by the problem method. In a few introductory or survey courses the lecture and text book method is used in combination with the

problem method. Most of the teaching staff are active business men whose practical experiences adequately fit them to carry through this type of instruction. Under such a method there is a more definite individual gain, for the theories of business are faced, so to speak, in their work clothes, and the student's vivid knowledge of economic principles is accompanied by the rise of a keener analytical interest in his business surroundings.

Business demands more than knowledge; it demands quick applications of that knowledge. A Northeastern graduate learns to think and act more independently and soundly when that demand is made of him.

Cases and tests are frequently supplemented by stimulating lectures and class group discussions. Written reports and examinations serve only that the student may measure his own progress or as indications to the instructor of his success in helping the student to a fuller understanding of his subject.

### Special Vocational Guidance

Northeastern University School of Business does not end its educational responsibilities in merely providing courses of study. Its individual students are helped to determine their own abilities and the field of work in which those abilities will give them the greatest chance of advancement. When a student's interest has been established, the school then assists the student in fulfilling the requirements for success in his chosen field.

A student's personal guidance in this respect is not judged as completed in his first year. Rather it is a constant process continually modified to meet the changing conditions of business life during his entire term. The administration and faculty have in the last few years worked out and put into effect new plans in a broader effort to —

Acquaint students with various fields of business activity so that they may make more rational choices of a vocational field in which to specialize.

Aid students in the choice of specific vocational objectives within their chosen fields.

Provide facilities for study of vocational and specific job requirements, as well as the opportunities and the steps necessary to achieve progress.

Co-ordinate the student's education more closely to his vocational interests.

### Staff of Instruction

The teaching staff of the School in Boston and the Divisions is recruited from business and professional leaders of New England business. The instructors are college-trained men who have proved their ability in their various fields of specialization. They are selected on the basis of their ability to convey knowledge to others in an interesting, inspiring, and effective manner. They are also chosen for the breadth of their training and experience. Their teaching is a work of enthusiasm freshened each evening by contact with those who are seeking seriously for knowledge, skill, and attitudes that will contribute to success.

While business essentials are stressed, cultural and ethical values are by no means neglected. The ability to think and judge independently usually results in cultural development. But the school has not been content to let the cultural side of its educational activities be merely a passive by-product. Instructors are men of high ideals and attainments, who have a genuine interest in those finer attributes of character and personality which make for



good citizenship and the appreciation of worthy ideals. A large part of the success of the School and of the individual students may be traced directly to the contacts with instructors of the caliber selected by the School of Business.

### Success of the Alumni

The best indication of the cumulative rewards to be won by pursuing a systematic program of study in spare evening hours is to be found in the records of Northeastern School of Business Alumni.

A recent study covering all Boston graduates conclusively shows that better positions and increased incomes are directly traceable to the evening hours spent in preparation at Northeastern.

A portion of this study is the comparison of positions held by the alumni when they entered the School as freshmen with the positions they held at the time of the study.

### ALUMNI POSITIONS

	Upon Entrance %	Now %
Presidents and Other Corporation Officers	0.0	3.8
Owners of Business	1.0	13.1
Treasurers and Comptrollers	.3	7.7
Accountants	7.0	16.9
Office Managers	1.6	7.4
Department Managers	2.9	11.5
Salesmen	3.8	3.8
Educators	8.6	7.0
Government Employees	2.6	7.7
Bookkeepers	18.8	1.3
Clerks	34.2	6.4
Factory Workers	5.8	2.2
Unemployed	2.9	1.9
Miscellaneous	10.5	9.3

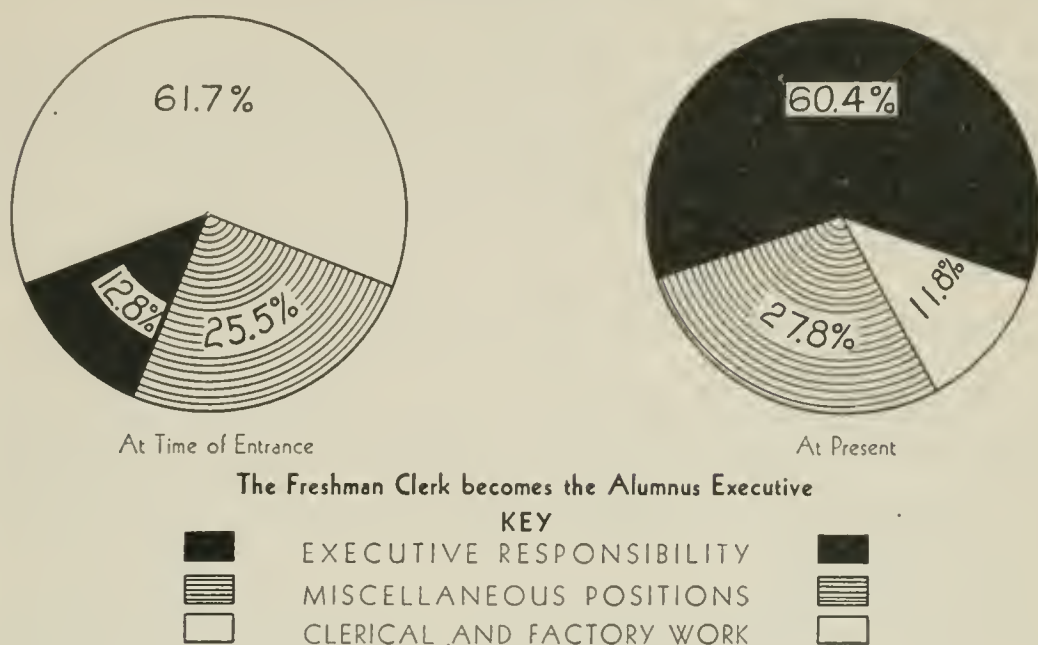
This pronounced trend to better and more responsible positions is further substantiated by a study of the income of the same alumni group over the same period.

It was found that the alumni who had been out of the School of Business not more than ten years, had increased their income an aggregate of 73.2%. For those who graduated more than ten years ago, this increase amounts to 223.6%. Another study of the income of students still in school shows that the average School of Business student begins his advancement in business and in income even while he is still at his training. On the average, the increase in income during the period of attendance more than covers tuition charges.

The charts on the next page show graphically the change from positions of minor responsibility to those of executive responsibility and indicate clearly the value of adequate business training. Even in depression periods Northeastern alumni, because of their training, have fared proportionately better than untrained men and women because it is the practice of employers to retain the best of their personnel when reductions become necessary.



## The Study of Positions Held by Alumni



However, the success of alumni is not to be measured entirely by the dollar and cents increase in their incomes. Northeastern University School of Business Alumni, as a result of their broad training, have enlarged their whole horizon of life. They have developed a keener appreciation of the human values which count most in life. They have found valuable avenues of friendship and social contact. They have discovered larger opportunities for participation in social and civic enterprises. They have become not only better business men but better citizens.

## The Student Body

The character of a student body determines the standards which a school can maintain. Nothing is more essential to the success of an educational institution than a careful selection of incoming students. This principle applies just as readily to an evening school as to a day school. Standards are invariably adjusted to the average intelligence of the students. For this reason, Northeastern University School of Business maintains standards of admission which result in a student body capable of pursuing work of standard college grade during evening hours.

The student body consists of 1404 men and women of widely varied ages and occupations. The youngest student is 17 years of age and the oldest 52 years. The average age is 24.0 years.

About one-sixth of the students are married men who have realized that if they are to increase their earning power they must fit themselves for advancement. That the training offered by the School has enabled the students to improve their earning capacities and enlarge their responsibilities is conclusively proved by a study which showed that students in the School substantially increased their incomes in the six year period between entering the School and graduation.

In the student body 253 high schools and other preparatory schools are represented. Sixty colleges and universities are represented by 155 students who are either graduates or have attended one or more years.

In Boston, 601 students come from 102 different cities and towns, commuting from considerable distances, and in Springfield, 34 different communities, largely in the Southern Connecticut Valley, contribute 556 students.

The 247 students at Providence represent 45 cities of Massachusetts and Connecticut as well as Rhode Island.

## Placement Service

### For Graduates

While the School cannot guarantee positions to its graduates, the number of requests for men usually exceeds the number available in the graduating class of any given year. The policy of the School is to find the best equipped and qualified men among its graduates for the positions which the School is called upon to fill.

The School in recommending a graduate for a position furnishes the prospective employer with the facts as to the graduate's ability, character, attitudes, habits, and other qualifications for the position as revealed by the School records. In the last analysis, however, placement in a position depends quite largely upon the graduate's ability to sell his services to the prospective employer. Most employers prefer to consider two or more candidates for a position and generally request the School to suggest more than one person. Many manufacturing and commercial firms throughout New England call upon this School to assist them in filling important executive and managerial positions.

No charge is made for placement service.

### For Students

Many requests from employers are received by the School, during normal times, for young men of potential ability to fill important clerical and junior executive positions. It is the policy of the School to serve the students whenever possible by placing them in those positions which promise attractive opportunities for development and advancement. The School, however, cannot guarantee to place its students, but it does endeavor to keep in close touch with those who desire placement service and to assist them in obtaining satisfactory advancements in positions and income. No charge is made for placement service. Those needing this assistance should file an application at the School Office.

In recommending students for positions, preference is given to those who have completed a year or more of study in the School. The School must know something as to the abilities, habits, character, and general worth of an individual as revealed by his record as a student before it can recommend him for a position.

# School of Business

## Administrative Organization

### General Officers of Administration

CARL STEPHENS ELL, A.B., M.S., Ed.M., Sc.D., *President of the University*  
FRANK PALMER SPEARE, M.H., LL.D., *President Emeritus of the University*  
EVERETT AVERY CHURCHILL, A.B., Ed.D., *Vice-President of the University*  
GALEN DAVID LIGHT, A.B., *Secretary-Treasurer of the University*  
RUSSELL WHITNEY, B.S., LL.B., *Dean*

### Local Officers of Administration

#### BOSTON

RUSSELL WHITNEY, B.S., LL.B., *Dean*  
EBEN OSWELL SMITH, B.S., *Registrar*  
J. KENNETH STEVENSON, B.C.S., *Assistant to the Vice-President*  
MILTON JOHN SCHLAGENHAUF, A.B., B.D., M.A., *Director of Admissions*  
FRANK GIVEN AVERILL, B.A., *Director of the Development Program*  
ELLIS MERTON PURINTON, B.B.A., *Director Vocational Guidance and Placement*  
MYRA WHITE, *Librarian*  
MARY B. FOOR, *Manager of the Bookstore*

#### PROVIDENCE DIVISION

LUTHER NEWTON HAYES, B.S., M.A., *Director*  
CARL WILLIAM CHRISTIANSEN, B.C.S., C.P.A., *Associate Dean*  
JOHN EDWARD CANDELET, B.S., A.M., M.B.A., *Counselor*  
CLARENCE SCOTT TAYLOR, B.S., *Assistant Counselor*

#### SPRINGFIELD DIVISION

JOHN DOANE CHURCHILL, A.B., A.M., *Director*  
EARL HENRY PAINE, B.C.S., *Treasurer*  
RALPH LORENZO BOWEN, B.C.S., B.S. in Ed., Ed.M., *Bursar*  
ERROL LEON BUKER, B.S., *Registrar*  
GUY DOLPHUS MILLER, A.B., Ed.M., C.P.A., *Associate Dean*

### Secretarial and Office Staff

#### BOSTON

DORIS CLARK TOWNE, *Secretary to the Dean*  
HELEN MARGARET STODDARD, *Recorder*  
ISABELLE CRAIG RAMSAY, *Bookkeeper*  
MURIEL FAITH WHITE, *Secretary to the Registrar*  
ELIN VICTORIA PETERSON, *Secretary to the Vice-President*  
VIRGINIA ESTELLE BECK, B.S., *Assistant Librarian*  
PHYLLIS CHAMBERS HOWE, B.S., *Assistant Librarian*  
GRACE HEWITT WATKINS, B.S., *Assistant Librarian*  
CYNTHIA WORT KING, *Assistant Librarian*  
FLORENCE BURTON AVELLAR, *Secretary to the Treasurer*  
MABEL ELLEN BEAN, *Secretary to the Assistant to the Vice-President*  
ETHEL ESTELLE CARTER, *Information, Central Offices*  
VIRGINIA CUSHING DARLING, *Purchasing Clerk, Central Offices*  
THELMA GERTRUDE DUNN, *Bookkeeper, Central Offices*

DAISY MILNE EVERETT, *Assistant Treasurer*  
HELEN LOUISE KOLDERUP, *Cashier, Central Offices*  
PRISCILLA HOPKINS, *Secretary, Central Offices*  
MARJORIE GRAFFTE PROUT, *Secretary to the President*  
JULIA HARRIET MASLEN, *Secretary to the President*  
ALYCE ANN NICHOLS, *Bookkeeper, Central Offices*

#### SPRINGFIELD DIVISION

HANNAH SUSANNA DAVIS, A.B., *Secretary to the Director*  
JEANROSS SELZAM, *Recorder*  
LAURA MARIE GAUDREAU, *Librarian*  
MILDRED MAE LEZINSKI, B.B.A., *Assistant Librarian*

#### PROVIDENCE DIVISION

DOROTHY RAWSON FISHER, B.S., *Registrar and Secretary to the Director*  
ELEANOR KNIGHT LUTHER, A.B., *Recorder*

### Divisional Committee

GALEN DAVID LIGHT	EVERETT AVERY CHURCHILL, <i>Chairman</i>	JAMES WALLACE LEES
RUSSELL WHITNEY	EBEN OSWELL SMITH, <i>Secretary</i>	SYDNEY KENNETH SKOLFIELD
JOHN DOANE CHURCHILL	LUTHER NEWTON HAYES	
	WILLIAM ALBERT LOTZ	



# School of Business

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## \* *Staff of Instruction*

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### Boston

FREDERICK MORSE BASSETT, B.C.S., Northeastern University; C.P.A.

*Constructive Accounting*

Accountant, Stewart, Watts and Bollong

ARTHUR HERBERT BERNSTONE, B.A., M.A., University of Colorado; M.A., Harvard University

*Psychology for Business and Industry*

Teaching Fellow in Psychology, Harvard University

ELLIOT SHEFFELD BOARDMAN, Bowdoin College; M.B.A., Harvard University

*Business Administration Seminar, Business Planning and Research*

Manager, Industrial Statistics Division, Federal Reserve Bank of Boston

CHARLES ALBERT CEDERBERG, Boston University

*Introductory Accounting, Intermediate Accounting*

Instructor in Bookkeeping, Boston Clerical School

ALFRED D'ALESSANDRO, B.C.S., LL.B., Northeastern University; M.B.A., Boston University; Harvard University; C.P.A.

*C.P.A. Review*

Professor of Accounting, Northeastern University

JOHN SYDNEY DAWSON, A.B., Holy Cross College; M.B.A., LL.B., Harvard University

*Torts and Crimes in Business; Rights of Debtors and Creditors*

Attorney at Law, Hurlburt, Jones, Hall and Bickford

JOHN ENNEGUESS, B.C.S., B.B.A., Northeastern University; Harvard University

*Accounting Problems*

Chairman, Department of Accounting, Worcester Junior College

LEO THOMAS FOSTER, A.B., A.M., Holy Cross College; Harvard University; Boston University

*Income Tax Procedure*

Head of Commercial Department, Jeremiah E. Burke High School

CHARLES MACKEY GANSON, B.A., Yale University; LL.B., Harvard University

*Insurance of Business Risks; Rights in Private Property*

Attorney at Law, Taylor, Ganson and Perrin

RALPH MYER GOLDSTEIN, S.B., Tufts College; LL.B., Harvard University

*Labor Relations*

Attorney at Law

HOWARD ETON GORTON, B.S., Hobart College; M.B.A., Harvard University

*Marketing*

Merchandise Manager, Dennison Manufacturing Company

HOWARD FRANCIS GREENE, Northwestern University; C.P.A.

*Advanced Accounting Problems*

Accountant, Lybrand, Ross Brothers and Montgomery

ROGER STANTON HAMILTON, A.B., University of Pittsburgh; M.A., Tufts College; Ph.D., Harvard University

*Business Economics*

Associate Professor of Economics, Northeastern University

J. KEENE HORNER, B.A., University of Oklahoma; M.B.A., Harvard University

*Public Speaking; Business Reports and Conferences; Counsellor, Business Readings and Theses*

Instructor in Business Administration and Public Speaking, Babson Institute

ROGER MAYHEW JENNINGS, B.B.A., Boston University; M.B.A., Harvard University

*Retail Store Management and Department Store Administration*

\*The Faculty for the year 1942-43 is published during the summer.



- ROGER JOHNSON, B.S., Bowdoin College; M.B.A., Harvard University  
*Business Statistics and Forecasting; International Economic Relations; Government Controls in Business*  
Statistician, New England Council
- LYMAN ALBERT KEITH, B.S., Northeastern University  
*Assistant Instructor in Business and Industrial Management*  
Graduate Assistant, Northeastern University
- RICHARD BERTRAM LENG, B.M.E., Brooklyn Polytechnic Institute; M.Adm.Eng., New York University  
*Principles of Production; Scientific Management*  
Head of Message Department, Raytheon Production Corporation
- ROBERT COURTNEY MATTOX, B.A., Dartmouth College  
*Business English; Advanced English*  
Assistant Sales Promotion Manager, Liberty Mutual Insurance Company
- HAROLD ADAM MOCK, B.C.S., Northeastern University; C.P.A.  
*Auditing*  
Partner, Stewart, Watts and Bollong
- FRANKLIN NORVISH, B.S., Colby College; M.A., Yale University; Boston University  
*Public Speaking*  
Instructor in English, Northeastern University
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*Assistant Instructor in Introductory and Intermediate Accounting*  
Teller, Cambridge Savings Bank
- HARRY OLINS, A.B., LL.B., Harvard University  
*Business Contracts, Legal Aspects of Business*  
Attorney at Law
- WILLIAM GARDNER PERRIN, B.A., Yale College; LL.B., Harvard University  
*Rights in Private Property*  
Attorney at Law, Taylor, Ganson and Perrin
- ANDREW PETERSEN, B.B.A., M.B.A., Boston University; C.P.A.  
*Accounting Aids to Management*  
Director of Accounting and Taxation, Babson Institute
- MATTHEW POROSKY, B.S., Massachusetts Institute of Technology  
*Business and Industrial Management; Industrial Management Problems and Policies*  
Vice-President in Charge of Sales, Eagle Signal Corporation and Vice-President of the Holtzer-Cabot Electric Company
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*Business English*  
Teacher, Newton High School
- PAUL BRAINERD SARGENT, B.A., LL.B., Yale University  
*Banking and Negotiable Paper*  
Attorney at Law
- ROBERT WILLIAM SHERBURNE, B.B.A., Northeastern University; Boston University  
*Intermediate Accounting*  
Instructor, Burdett College
- ELDON CAMPBELL SHOUP, A.B., Washburn College; M.B.A., Harvard University  
*Principles of Selling; Sales Management*  
Regional Business Consultant, Bureau of Foreign and Domestic Commerce
- EBEN OSWELL SMITH, B.S., Northeastern University; Boston University  
*Economic Development of the U. S.*  
Registrar, Northeastern University, Evening Division
- IRWIN SPEAR, Ph.B., University of Vermont  
*Principles of Advertising; Retail Store Advertising*  
Advertising Service

WILLIAM HARRY STOUT, B.S., M.S., University of Illinois; C.P.A.  
*Cost Accounting*  
 Accountant, A. C. Lawrence Leather Company

HARRY WILBUR THOMPSON,  
*Credits and Collections*  
 Credit Manager, General Sea Foods Corporation

MARK WAINER, LL.B., LL.M., Boston University  
*Agents and Agencies; Business Organizations; Taxes and Taxable Interests*  
 Attorney at Law

KENNARD WOODWORTH, A.B., Harvard University  
*Investment Principles and Practice; Financial Organization*  
 Boston Insurance Company

### Springfield Division

CARL FERDINAND ALSING, B.S., M.S., Worcester Polytechnic Institute  
*Advanced Engineering Drawing*  
 Development Engineer, Technical Section, Westinghouse Electric and Manufacturing Co.

INGHAM CHAMBERLAIN BAKER, A.B., Dartmouth College; The Amos Tuck School  
*Marketing Problems*  
 Director and Assistant Treasurer, G. & C. Merriam Company

ERNEST ADOLPH BERG, B.C.S., LL.B., Northeastern University; C.P.A.  
*Advanced Accounting Problems*  
 Partner, Hitchcock & Co., Accountants; Attorney at Law

REGINALD NELSON BLOMFIELD, A.B., Williams College  
*Advanced Algebra; Plane Trigonometry*  
 Personnel Department, Massachusetts Mutual Life Insurance Company

DAVID HOLBROOK BROWN, A.B., Middlebury College; LL.B., Boston University; A.M.,  
 Trinity College  
*Business Economics; Financial Organization; Economic Development of the U. S.*  
 Instructor, Classical High School

CLARENCE IRVING CHATTO, A.B., Bates College; A.M., Harvard University  
*Advanced English*  
 Instructor, High School of Commerce

CARL ODLIN CHAUNCEY, LL.B., Northeastern University  
*Legal Aspects of Business*  
 Member of Legal Staff, Farm Credit Administration of Springfield; Attorney at Law

ROBERT BROWNING CLARK, JR., A.B., Dartmouth College; M.C.S., The Amos Tuck School  
*Business Economics*  
 Assistant Advertising Manager, Strathmore Paper Company. On leave of absence

ALEXANDER DUNCAN DAVIS, B.T.E., Lowell Textile Institute  
*Engineering Drawing*  
 Instructor, Technical High School

LEONARD COLERICK FLOWERS, B.S., M.S., Carnegie Institute of Technology  
*Physics*  
 Member of Engineering Staff, Westinghouse Electric and Manufacturing Company

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*Industrial Management Problems and Policies*  
 Member of Staff, Scovell, Wellington & Co.

EDWARD PHELPS GRACE, B.C.S., Northeastern University; C.P.A.  
*Accounting Aids to Management*  
 Assistant General Manager, Springfield Merchants, Inc.

CLARENCE MORTIMER HALL, B.S., M.S., Worcester Polytechnic Institute  
*Electricity*  
 Instructor, Classical High School

GLEN LEON HEATHERS, A.B., M.S., University of Washington; Ph.D., Yale University  
*Psychology for Business and Industry*  
 Instructor, Amherst College

FRANK YAEGER HESS, S.B., Harvard College  
*Chemistry*  
 Instructor, Classical High School

WALDEN PORTER HOBBS, Bates College; University of Toulouse; C.P.A.  
*Accounting Problems*  
 Assistant Treasurer, Consolidated Dry Goods Company

RICHARD EDWIN HOLMES, B.S., Carnegie Institute of Technology; M.S., University of Pittsburgh  
*Heat Engineering*  
 Engineering Staff Member, Westinghouse Electric and Manufacturing Company

GEORGE WRIGHT HOWE, A.B., M.B.A., Harvard University  
*Business Administration Seminar; Business Planning and Research*  
 Treasurer, Century Manufacturing Co.

FRED WOODING HUTCHINSON, B.S., Wesleyan University; Boston University  
*Analytic Geometry; Calculus; Counselor to Engineering and Business Students*  
 Instructor, Technical High School

CYRUS WALTER JONES, S.B., Harvard College  
*Business English*  
 Instructor, Technical High School

HARRY HARRIS KING, B.S., Worcester Polytechnic Institute; C.P.A.  
*Cost Accounting*  
 Public Accountant. On leave of absence

GUSTAV HENRY KOCH, M.E., Rensselaer Polytechnic Institute  
*Strength of Materials*  
 Engineering Staff, Westinghouse Electric and Manufacturing Company

FOREST OAKLEY MAVIS, B.Sc., Ohio State University  
*Business and Industrial Management*  
 Comptroller, F. W. Sickles Company

GUY DOLPHUS MILLER, A.B., Ohio University; University of Wisconsin; Harvard Graduate School of Business Administration; Ed.M., Harvard University; C.P.A.  
*Business Reports and Conferences; Counselor to Students including Theses and Business Readings*  
 Instructor, High School of Commerce

JOHN HAYNES MILLER, A.B., Washington and Jefferson College  
*Business Statistics and Forecasting*  
 Vice-President and Actuary, Monarch Life Insurance Company

FREDERICK CHAPIN OBER, A.B., Harvard University  
*Credits and Collections*  
 Assistant Treasurer, Springfield Five Cent Savings Bank

JAMES ARTHUR PATTERSON, B.S., Northeastern University; A.M., Boston University  
*Intermediate Accounting; Constructive Accounting; Auditing*  
 Director, Placement and Guidance, High School of Commerce

HORACE JACOBS RICE, B.S., Wesleyan University; LL.B., Harvard University  
*Government Controls in Business*  
 Attorney at Law

CARROLL WARD ROBINSON, A.B., Clark College; Ed.M., Harvard University  
*Public Speaking*  
 Principal, Myrtle Street Junior High School

JAMES THOBURN SMITH, B.C.S., Northeastern University  
*Income Tax Procedure*  
 Assistant Trust Officer, Union Trust Company of Springfield

LELAND WILLIAM SMITH, A.B., Harvard University; A.M., Columbia University  
*Advanced Algebra; Trigonometry*  
 Instructor, Classical High School and Springfield Junior College

- JEROME LYON SPURR, B.S., Massachusetts Institute of Technology  
*Mechanics*  
 Assistant Civil Engineer, Metropolitan District Water Supply Commission, on leave of absence for military service as Assistant Professor of Military Science and Tactics, Massachusetts Institute of Technology
- ELO CARL TANNER, B.M.E., University of Minnesota; University of Pittsburgh  
*Advanced Engineering Drawing; Design*  
 Refrigeration Development and Design Engineer, Westinghouse Electric and Manufacturing Company
- HAMILTON TORREY, B.S., University of Pennsylvania  
*Business English*
- GILBERT CREIGHTON WALKER, A.B., Ed.M., Harvard University; Northeastern University  
*Introductory Accounting*  
 Instructor, High School of Commerce
- ELIOT LELAND WIGHT, B.A., Yale College; University of Colorado, Graduate School  
*Advertising Principles; Advertising Campaigns; Principles of Selling; Sales Management*  
 Advertising Manager, United States Envelope Company
- PAUL ALMY WILKS, A.B., Harvard College  
*Business English*  
 Chief Accountant, Strathmore Paper Company, on leave of absence for military service as Major, United States Ordnance Department, assigned to Hartford Ordnance District

### Providence Division

- HOWARD SAMUEL ALMY, B.C.S., Northeastern University  
*Credits and Collections*  
 Credit Manager, Collyer Insulated Wire Company, Inc.
- GEORGE REGINALD ASHBEX, B.A., Brown University  
*Advertising*  
 Advertising Manager, Nicholson File Company
- ALBERT HERBERT BAER, Northeastern University; C.P.A.  
*Income Tax Procedure*  
 Partner, Lees, Baer and Hanover
- ALTON WILSON BARSTOW, B.S., Norwich University  
*Principles of Selling; Sales Management*  
 Sales Manager, Narragansett Electric Company
- EDWARD SUMNER BRACKETT, JR., A.B., Yale College; J.D., University of Arizona Law School  
*Government Controls in Business*  
 Attorney at Law
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*Financial Organization*  
 Head of Department of Economics, Rhode Island State College
- JAMES HARPER CHASE, A.B., M.A., Brown University  
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 Instructor, and Head of English Department, Central High School
- CARL WILLIAM CHRISTIANSEN, B.C.S., Northeastern University; C.P.A.  
*Introductory Accounting*  
 Partner, Christiansen & Co.
- CHRISTOPHER DELSESTO, B.B.A., Boston University; Northeastern University; LL.B., Georgetown University; C.P.A.  
*C.P.A. Review; Cost Accounting*  
 Director of Coordination and Finance, State of Rhode Island
- JOHN HENRY HANOVER, C.P.A.  
*Advanced Accounting Problems*  
 Partner, Lees, Baer and Hanover
- GEORGE THEODORE HELM, B.B.A., Northeastern University; C.P.A.  
*Accounting Aids to Management*  
 Accountant, Christiansen & Co.



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Controller, Grinnell Company

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*Business and Industrial Management*

Instructor of Economics, Rhode Island State College

CHESTER TOTTEM MOREY, B.S., Massachusetts Institute of Technology

*Industrial Management Problems and Policies*

Director, Rhode Island Apprenticeship Training in Federal Apprenticeship Unit of the

United States Department of Labor

CLIFTON IRVING MUNROE, A.B., Brown University; LL.B., Harvard University

*Public Speaking*

Attorney at Law, Voight, Wright, Munroe and Clason

NICHOLAS PICCHIONE, B.C.S., Northeastern University; C.P.A.

*Accounting Problems*

Accountant

ROBERT ROCKAFELLOW, B.S., M.A., University of Pennsylvania

*Business Economics; Economic Development of the U. S.*

Assistant Professor of Economics, Rhode Island State College

ELMER REID SMITH, Ph.B., A.B., A.M., Brown University

*Advanced English; Business Reports and Conferences*

Vice-Principal, Oliver Hazard Perry Junior High School

SHERMAN LEWIS SMITH, A.B., Dartmouth College

*Psychology for Business and Industry*

Sales Promotion Manager, Bostitch, Inc.

ADAM ANDREW SUTCLIFFE, B.S., Dartmouth College; M.C.S., The Amos Tuck School

*Marketing*

Treasurer and Manager, Adam Sutcliffe Company

ALLYN KINGSLEY SUTTELL, Northeastern University; C.P.A.

*Intermediate Accounting*

Partner, F. E. Welch & Co.



Richards Hall. Many of the School of Business classes meet in this building

# School of Business

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## *Programs of Instruction*

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**T**HE SCHOOL provides the following major programs of instruction for undergraduate students:

### **Accounting**

1. A specialized four-year program leading to the title of Associate in Accounting.
2. A six-year program leading to the degree of Bachelor of Business Administration in Accounting. (See page 25.)

### **Management**

Four- and six-year programs with opportunity for specialization in one of the following fields:

Merchandising Management  
Industrial Management

The four-year programs lead to the title of Associate in Business Administration and the six-year programs to the degree of Bachelor of Business Administration in Management. (See page 27.)

### **Law and Business Management**

A four-year program combining the study of law and business, leading to the degree of Bachelor of Commercial Science in Law and Business Management. This course is offered in Boston but not in the Divisions. (See page 30.)

### **Engineering and Business**

A six-year program combining the study of engineering and business, leading to the degree of Bachelor of Business Administration in Engineering and Management. This program is offered in Boston and Springfield. (See page 32.)

### **Special Programs**

Where the individual needs of a student necessitate, the School will provide special one-year, two-year, or longer programs to meet those needs. If, for good reasons, a student wishes to vary a regular program, he may do so upon securing approval from the Dean. (See page 33.)

### **Single or Unit Courses**

For those who may wish to pursue one or more related or unrelated subjects instead of a title or degree program, opportunity is provided for enrolling in single or unit subjects. (See page 33.)

## The Accounting Programs

Students of accounting in the School of Business may follow programs of training in this specialized field which prepare them to take the examination for Certified Public Accountant (C.P.A.) or to carry on work of major responsibility in commercial accounting with private or public business firms.

Thoroughness of instruction is all-important. The trained accountant must be able to adapt himself quickly to the rapidly changing conditions of modern business. He should be ready to assume executive responsibility outside the field of accounting. This involves, of course, a background of understanding of various functions of business quite apart from the specialized accounting field. The shorter accounting program includes prescribed subjects for the title of Associate in Accounting and adequate preparation for the C.P.A. examination.

Upon completion of the four years of prescribed subjects for the title of Associate in Accounting, students may take two years of additional study required for the degree of Bachelor of Business Administration. These two additional years are greatly to the advantage of the student, since they give an opportunity to study managerial and administrative subjects which fit him to assume responsibility outside of the accounting field, and give him the basic understanding of business at large which is of vital importance to accountants who hope to make real progress.

### Opportunity in the Accounting Profession

Taxation, legal requirements governing qualifications for listing in the stock market, corporation laws governing the preparation of financial reports, the needs of government, and many other developments in the conduct of business have broadened the scope of accounting to such a degree that in normal times the supply of trained accountants is not adequate to meet the demand. Moreover, a knowledge of accounting is universally regarded as essential in all phases of business management. There is a large field of public accounting which is being developed, and with the increased emphasis which financial institutions are placing upon accounting, the need for college trained Certified Public Accountants is increasing every year.

Opportunities in the field of accounting are many. Financial returns compare favorably with those of other professions such as law, medicine, and engineering.

The normal development of an accountant from the time he gets his degree is as follows:

**First** — as a junior assistant, he works on routine accounting procedure which is highly essential as a part of his experience. Compensation usually ranges from \$1,000 to \$1,500. The average man spends about two years in this position.

**Second** — as a senior assistant accepting some responsibilities, and performing somewhat of a professional service, the average man gets a salary which ranges from \$1,400 to \$2,500 a year.

**Third** — he now assumes full responsibilities for important assignments and becomes a senior accountant with a salary range from \$2,500 to \$5,000.

As a supervisor in charge of the work of other accountants, the salary range goes up to \$3,500 to \$10,000.



**Fourth** — the peak of success for accountants is firm membership. As a firm member, the accountant may not earn more than in the other higher positions, but usually earnings range from \$4,000 to \$25,000 a year, and frequently as high as \$50,000.

While the remuneration in the field of public accounting for properly trained men is attractive, the field of commercial and private accounting offers even more attractive inducement. The latest census figures show that there are 191,571 persons engaged as accountants and auditors in the United States. From trained accountants are selected many of the business and industrial executives, including office managers, comptrollers, treasurers, and other officers of business concerns. Salaries of treasurers and comptrollers vary from \$4,000 to \$15,000; office managers from \$3,000 to \$6,000; chief accountants from \$2,500 to \$5,000. Many senior accountants have advanced into responsible executive positions paying \$10,000 and more.

### Qualifications for Success in Accounting

There is no easy or royal road to success in accounting. The technique can be mastered only through continuous application, comparable to the preparatory work of a doctor, lawyer, or engineer. Mathematical accuracy is extremely important. The student must learn to analyze logically and soundly; to visualize and present situations as they develop. Each step, however painstaking and laborious, must be mastered by one who hopes to succeed either as a public or private accountant. Above all, the higher standards of honesty must be maintained, and the accountant's personal and ethical conduct must be above suspicion. The successful accountant is able to make a good appearance, to present an agreeable personality, and to express his ideas clearly in good English. Northeastern University School of Business tries to train its graduates so that they possess all these qualifications. The School encourages only men with the proper personal, mental, and educational qualifications to enter the profession.

### Requirements for Title of Associate in Accounting

(Four Years of Study Required)

Course Numbers*	Subjects	Semester Hours
A 1-2	Introductory Accounting	5
A 3-4	Intermediate Accounting	5
A 7-8	Accounting Problems	5
A 9-10	Cost Accounting	5
A 11	Auditing	2½
A 13-14	Income Tax Procedure	5
A 15	Constructive Accounting	2½
A 17-18	Advanced Accounting Problems	5
A 19-20	C.P.A. Problems	5
E 1-2	Business English	5
Ec 1-2	Business Economics	5
Ec 3-4	Financial Organization	5
L 1-2	Legal Aspects of Business (C.P.A. Law)	5
Total Semester Hours Required for Title		60

\* See notes at bottom of page 33.



*Requirements for B.B.A. Degree in Accounting*  
(Six Years of Study Required)

Course Numbers*	Subjects	Semester Hours
A 1-2	Introductory Accounting	5
A 3-4	Intermediate Accounting	5
A 7-8	Accounting Problems	5
A 9-10	Cost Accounting	5
A 11	Auditing	2½
A 13-14	Income Tax Procedure	5
A 15	Constructive Accounting	2½
A 17-18	Advanced Accounting Problems	5
A 19-20	C.P.A. Problems	5
E 1-2	Business English	5
E 5	Public Speaking	2½
E 6	Business Reports and Conferences	2½
E 7, 8	Business Readings or T 3-4 Thesis	5
Ec 1-2	Business Economics	5
Ec 3-4	Financial Organization	5
L 1-2	Legal Aspects of Business	5
Ec 7-8	Business Statistics and Forecasting	5
M 7-8	Credits and Collections	5
M 11-12	Government Controls in Business	5
	Occupational Experience	30
	Electives (To be selected subject to approval)	10
	Total Semester Hours Required for Degree	125

The normal period of attendance for the Associate in Accounting Program is four years, thirty-three weeks each year, three evenings a week, two hours each evening; for the B.B.A. Degree Program, six years, thirty-three weeks each year, three evenings a week, two hours each evening, except for those who enter with advanced standing credit. Students who wish to attend less than three evenings a week may do so, extending the time required to complete their programs.

### The Management Programs

"The field of business within the last twenty years has so widened and become so much more complex that the successful business man finds no limit set to his vision. As an executive he must possess the faculty of interpreting current events, the ability of analyzing situations, and a thorough knowledge of the principles underlying all successful business practice."<sup>1</sup>

The complexity of modern business makes it exceedingly difficult for those who are dependent upon their own experience to develop those abilities and obtain the knowledge so necessary for the desired advancement in business. A broad perspective of business organization and operation develops viewpoints and habits that promote clear thinking and sound judgments in business decisions. This broad perspective demands not mere facts but also that executive power which can initiate plans and put them into effective operation. This power is seldom acquired from experience in details but comes from a thorough knowledge of business principles and of the proper application

\* See notes at bottom of page 33.

<sup>1</sup> Statement by Dr. Jeremiah W. Jenks, late President, Alexander Hamilton Institute.

of those principles to the solution of problems. Executive and managerial leadership demands that power; the School of Business through its Management Programs proposes to develop it.

A recent extensive study<sup>1</sup> of occupational opportunities shows that most college men who enter work in distribution, industry, transportation, and banking become involved sooner or later in some function of operating management where they become responsible for the direction of human effort within their organization.

### Merchandising Management

A four-year program leading to the title of Associate in Business Administration and a six-year program leading to the degree of Bachelor of Business Administration are offered to students interested in Merchandising Management. Included are such courses as marketing, purchasing, retail store management, advertising, selling, credits and collections, department store administration, and many others so essential to a sound knowledge of present day business problems. Not only are these rather specialized fields covered adequately but a thorough training is given in the principles of economics and the application of these principles to modern business conditions, thus making it possible for the student to see himself in relationship to the executive and managerial responsibilities he will need to assume later.

### Requirements for the B.B.A. Degree in Management and the Title of Associate in Business Administration (Merchandising Major)

The courses listed immediately below meet in full the requirements for the title of Associate in Business Administration and in part the requirements for the degree of Bachelor of Business Administration.

Course Numbers*	Subjects	Semester Hours
A 5-6	Accounting Aids to Management**	5
D 1-2	Marketing	5
D 3	Principles of Selling	2½
D 4	Sales Management	2½
D 5	Principles of Advertising	2½
D 6	Retail Store Advertising	2½
E 1-2	Business English	5
E 5	Public Speaking	2½
E 6	Business Reports and Conferences	2½
Ec 1-2	Business Economics	5
Ec 3-4	Financial Organization	5
L 1-2	Legal Aspects of Business	5
M 1-2	Business and Industrial Management	5
M 5	Psychology for Business and Industry	2½
M 6	Purchasing	2½
M 13-14	Retail Store Management and Department Store Administration	5
	Total semester hours	60

<sup>1</sup>Dewhurst and Bossard, University Education for Business, Univ. of Pa. Press.

\*, \*\* See notes at bottom of page 33.



The following requirements in addition to those listed previously must be met by all candidates for the degree of Bachelor of Business Administration.

Course Numbers*	Subjects	Semester Hours
E 7, 8	Business Readings or T 3-4, Thesis	5
Ec 7-8	Business Statistics and Forecasting	5
M 7-8	Credits and Collections	5
M 11-12	Government Controls in Business	5
M 17-18	Business Planning and Research	5
M 19-20	Business Administration Seminar	5
	Occupational Experience	30
	Electives (To be selected subject to approval)	5
	Total Semester Hours Required for Degree	125

### Industrial Management

For students interested in the industrial side of business management, a four-year title and a six-year degree program are offered. Not only are the usual business subjects included, but also adequate courses in the more technical fields of production and scientific management. Careful study is made of the fundamental manufacturing processes, factory organization, product design, methods of production and production control, time and motion study, and related topics. This program offers excellent training for managerial responsibility in industrial and commercial enterprises where a technical knowledge of management problems combined with a business background is needed.

### Requirements for the B.B.A. Degree in Management and the Title of Associate in Business Administration (Industrial Major)

The courses listed immediately below meet in full the requirements for the title of Associate in Business Administration and in part the requirements for the degree of Bachelor of Business Administration.

Course Numbers*	Subjects	Semester Hours
A 5-6	Accounting Aids to Management**	5
D 1-2	Marketing	5
D 3	Principles of Selling	2½
D 4	Sales Management	2½
E 1-2	Business English	5
E 5	Public Speaking	2½
E 6	Business Reports and Conferences	2½
Ec 1-2	Business Economics	5
Ec 3-4	Financial Organization	5
L 1-2	Legal Aspects of Business	5
M 1-2	Business and Industrial Management	5
M 3	Principles of Production	2½
M 4	Scientific Management	2½
M 5	Psychology for Business and Industry	2½
M 6	Purchasing	2½
M 9-10	Industrial Management Problems and Policies	5
	Total Semester Hours	60

\*, \*\* See notes at bottom of page 33.

The following requirements in addition to those listed previously must be met by all candidates for the degree of Bachelor of Business Administration.

Course Numbers*	Subjects	Semester Hours
E 7, 8	Business Readings or T 3-4, Thesis	5
Ec 7-8	Business Statistics and Forecasting	5
M 7-8	Credits and Collections	5
M 11-12	Government Controls in Business	5
M 17-18	Business Planning and Research	5
M 19-20	Business Administration Seminar	5
	Occupational Experience	30
	Electives (To be selected subject to approval)	5
	Total Semester Hours Required for Degree	125

The normal period of attendance for the Associate in Business Administration program is four years, thirty-three weeks each year, three evenings a week, two hours each evening and for the B.B.A. degree programs, six years, thirty-three weeks each year, three evenings a week, two hours each evening, except for those who enter with advanced standing credit. Students who wish to attend less than three evenings a week may do so, extending the time required to complete their programs.

## Law and Business Management Program

*(This program is offered in Boston only)*

The complexity of the modern business structure emphasizes the increasing necessity for the business executive to understand not only the principles of his business but to possess a fundamental knowledge of the laws under which his business operates. In order to meet this need the School has developed a four-year program leading to the degree of Bachelor of Commercial Science in Law and Business Management.

As all business is organized and conducted on a legal basis, executive positions in practically every business demand at least a basic knowledge of the law on the part of those who are to be successful.

Underlying present large-scale marketing and production, which characterize today's business, is a net work of law which safeguards the rights of business men as they deal with one another and also defines the channels into which business practices shall be directed and through which they shall move. Business executives find a real and vital need for men and women who are not only versed in business but who also can offer a background of training in the legal principles involved in business. The student so equipped will bring to his position an advantage which will be of inestimable value.

This four-year degree program provides a sound and basic knowledge of those principles of law and of business which are so essential for success in various fields of business. The program meets particularly the needs of employees of banks and trust companies, insurance officers and claim adjusters, real estate operators, accountants, and those engaged in executive positions in business and industrial organizations.

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\* See notes at bottom of page 33.



The program is primarily a study of the law only as it relates to business procedure and operation. It does not prepare the student for bar examinations nor is it planned to make it possible for the business executive to dispense with the services of attorneys. It makes it possible, however, for the executive to understand how the present intricate net of legal rules and regulations affects his business undertaking.

The cases selected for study are chosen not only for their value in developing an understanding of the law involved, but also for their very practical application to every-day business. They are primarily business cases selected with a view to giving the student a knowledge of business problems and procedures.

The law courses are conducted by practicing attorneys. In order that students may gain an adequate knowledge of the law and may develop effectively the powers of legal analysis, the case method of instruction generally used in schools of law is employed.

Students desiring to obtain the degree of Bachelor Business Administration in Management may do so by completing two additional years of work. The actual courses pursued will depend somewhat upon the objective of the student, and have been selected with a view to supplementing the work completed in the Law and Business Management program.

### *Requirements for the Degree of Bachelor of Commercial Science in Law and Business Management*

<i>Course Numbers*</i>	<i>Subjects</i>	<i>Semester Hours</i>
L 4-5	Business Contracts	5
L 6	Agents and Agencies	2½
L 7	Insurance of Business Risks	1½
L 8	Torts and Crimes in Business	1
L 10-11	Business Organizations	5
L 12	Law of Sales	2½
L 13	Trade Regulation	2½
L 14-15	Rights in Private Property	5
L 16	Taxes and Taxable Interests	2½
L 17	Labor Relations	2½
L 18-19	Banking and Negotiable Paper	5
L 20	Rights of Debtors and Creditors	2½
A 5-6	Accounting Aids to Management	5
Ec 1-2	Business Economics	5
M 1-2	Business and Industrial Management	5
	Electives (To be selected subject to approval)	7½
	Total Semester Hours Required for Degree	60

The normal period of attendance for this program is four years, thirty-three weeks each year, three evenings each week and two hours each evening, except for those who enter with advanced standing credit. Those who wish to attend less than three evenings a week may do so and take a longer period of time to complete their programs.

\* See notes at bottom of page 33.

## Engineering and Business Program

*(Offered in Boston and Springfield)*

The Engineering and Business curriculum offers basic training by combining fundamental engineering and business courses in a six-year degree program. It provides reliable training for those now engaged in or who plan to enter positions of managerial responsibility in industrial or commercial enterprises where a scientific or engineering background is required.

Many technically trained men find it impossible to assume greater managerial responsibility because they do not have a knowledge of fundamental business principles so essential in many of the better positions in industry. On the other hand, many business trained men are employed in industrial plants where a scientific background is most desirable if not necessary for advancement. This program has been developed to serve both groups.

In Boston, the Engineering courses in this program are given under the auspices of an affiliated school of Northeastern University, the Lincoln Technical Institute, which offers several four-year curricula in Engineering leading to the title of Associate in Engineering. These curricula permit specialization in Architectural Engineering, Chemistry, Civil Engineering, Electrical Engineering, Mechanical Engineering with Aeronautical or Air-Conditioning options, and Structural Engineering. The business courses are conducted by the School of Business which awards the degree of Bachelor of Business Administration in Engineering and Management.

The required business courses are largely in the field of industrial management and are designed to supplement the engineering work of the student. A careful study is made of the fundamental manufacturing processes, factory organization, production design, methods of production and production control, and time and motion study.

Students pursuing a program of engineering and business subjects ordinarily complete the work required for the title of Associate in Engineering before starting business study. The following minimum credits and courses are required to meet degree requirements.

### *Requirements for the Degree of Bachelor of Business Administration in Engineering and Management*

<i>Course Numbers*</i>	<i>Subjects</i>	<i>Semester Hours</i>
	Lincoln Technical Institute courses	60
A 5-6	Accounting Aids to Management	5
E 6	Business Reports and Conferences	2½
E 7, 8	Business Readings or T 3-4, Thesis	5
Ec 1-2	Business Economics	5
M 1-2	Business and Industrial Management	5
M 3	Principles of Production	2½
M 4	Scientific Management	2½
M 6	Purchasing	2½
M 9-10	Industrial Management Problems and Policies	5
	Occupational Experience	30
	Total Semester Hours Required for Degree	125

\* See notes at bottom of page 33.

In the Springfield Division, a more general program with a mechanical engineering major is offered. The degree granted is the Bachelor of Business Administration in Engineering and Business.

For more detailed information, consult the special booklets issued by the Lincoln Technical Institute in Boston or by the Springfield Division.

### Special Programs and Single Courses

Special one-year, two-year, or longer programs may be arranged to meet the needs of any student who does not find in the regular programs offered by the School the type of training desired.

Such programs must be approved by the Dean and are made up only from courses offered in the Evening Division of the University.

Any course may be taken singly or in combination by those who have the necessary preliminary training to pursue with profit the course or courses selected.

Students should consult the schedules of courses offered in Boston and in the Divisions for a list of available courses. Full credit may be allowed for any of these courses, if the student taking a special program desires to become a candidate for a degree or title, provided the courses he has pursued are a part of the degree or title program chosen.



\* A double number, as M 1-2 or A 7-8, indicates a full-year course covering both the first and second semesters. A single course number, as A 11, indicates a half-year course covering only one semester. The letters indicate the classification of the course as: A, Accounting; D, Distribution; Ec, Economics; E, English; L, Law; M, Management.

\*\* Students in the Management Programs desiring more accounting than the single course of Accounting Aids to Management may elect both Introductory and Intermediate Accounting in lieu of Accounting Aids to Management. If Accounting Aids to Management is taken, Introductory and Intermediate Accounting cannot also be elected for credit, and vice versa.



# School of Business

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## Description of Courses

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**T**HE UNIVERSITY reserves the right to withdraw, modify, or add to the courses offered, or to change the order of courses in curricula as may seem advisable.

The University further reserves the right to withdraw in any year any elective or special course for which less than twelve enrollments have been received. Regular students so affected by such withdrawal will be permitted to choose some other course. In the case of special students a full refund of all tuition and other fees will be made.

Students in Boston and in the Divisions at Springfield and Providence should consult the schedule of classes in the respective city where they are to attend for information as to courses given during the present year.

All full-year courses are numbered with a double consecutive number and all half-year courses with a single number. The letter or letters immediately preceding the numbers indicate the classification of the course. The number of class sessions indicated for each course includes the final examination session.

### ACCOUNTING (A)

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*Applicants for admission to the School who have had experience in accounting or bookkeeping or who have pursued systematic courses in institutions of less than college grade may take an examination for placement purposes in Introductory Accounting. Those who pass this examination will be admitted to Intermediate Accounting and may substitute an elective course in lieu of Introductory Accounting.*

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#### INTRODUCTORY ACCOUNTING

A 1-2 Thirty-three sessions; 5 hours' credit. No previous knowledge of bookkeeping or accounting necessary.

This course provides basic instruction for those who plan to specialize in accounting or for those who wish to enroll later for more advanced courses. Emphasis is placed upon proprietorship accounts, including books of entry, statements, business practices, adjustments, and an introduction to partnership accounts. Drill and practice work are required for proficient handling of simple accounting transactions.

#### INTERMEDIATE ACCOUNTING

A 3-4 Prerequisite: A 1-2, or the passing of a placement examination. Thirty-three sessions; 5 hours' credit.

A study of partnership accounting, including organization, dissolution, and liquidation of the partnership, emphasis being given to the corporate form of accounts with attention to manufacturing and trading activities. In addition to the drill and practice work on accounting technique, a mastery of basic principles of general accounting is required.

#### ACCOUNTING AIDS TO MANAGEMENT

A 5-6 Thirty-three sessions; 5 hours' credit. No previous knowledge of bookkeeping or accounting necessary.

A study of the broad background of accounting and business transactions so as to enable the student to analyze and interpret intelligently financial statements and other accounting reports. The course demonstrates the use of accounting in management and financial control. Emphasis is placed on the development of accounting fundamentals, preparation of financial statements, corporation and manufacturing accounts, evaluation of balance sheet items, analysis and interpretation of financial statements and other trends, and the use of accounting as an aid to management.



### ACCOUNTING PROBLEMS

A 7-8 Prerequisite: A 3-4 Thirty-three sessions; 5 hours' credit.

Develops power of analysis in utilizing accounting data. Problems are used as the basis for instruction and discussion to cover the more advanced phases of financial statements and accounts found in the more complex business organizations.

### COST ACCOUNTING

A 9-10 Prerequisite: A 7-8 Thirty-three sessions; 5 hours' credit.

Acquaints the student with the relationship of cost accounting to management and administration control and shows how adequate cost systems may further the intelligent management of business enterprises. Numerous problems serve as the basis for a study of the various accounts, records, systems, and methods commonly used in modern cost accounting.

### AUDITING

A 11 Prerequisite: A 7-8 Seventeen sessions; 2½ hours' credit.

Accounting facts and practices are analyzed to determine whether or not they conform to professional practice. The work of the auditor in relationship to professional requirements, the mechanics of auditing, and the preparation of reports and certificates are studied.

### INCOME TAX PROCEDURE

A 13-14 Prerequisite: A 3-4 Thirty-three sessions; 5 hours' credit.

A detailed study is made of Federal and State tax laws, their administration and application to the incomes of individuals, partnerships, corporations, and fiduciaries; treasury and tax department regulations and rulings; and of the decisions of the Board of Tax Appeals, and of various Federal and State courts. Practice in making out reports and returns, and a study of the procedure of handling claims, form the basis of applied instruction.



*The effectiveness of a written or spoken word is one measure of a man's business ability*

### CONSTRUCTIVE ACCOUNTING

A 15 Prerequisite: A 7-8 Seventeen sessions; 2½ hours' credit.

To acquaint students with the principles underlying the construction of accounting systems and the procedure of system installation. The course is developed by means of problem projects beginning with an analysis of the accounting needs of a small business. By gradual steps increasingly larger businesses are studied and accounting systems developed to meet their needs. Special attention is given accounting records in relation to the expansion of the accounting system.

### ADVANCED ACCOUNTING PROBLEMS

A 17-18 Prerequisite: A 7-8 Thirty-three sessions; 5 hours' credit.

This course is designed primarily to meet the requirements of those students who intend to enter the accounting profession or to assume responsibilities in commercial accounting. Emphasis in this course is devoted to specialized problems in connection with consolidations, mergers, holding companies, and other more advanced and complicated accounting situations. The course thoroughly prepares the student for the C.P.A. Review in final preparation for the State C. P. A. and American Institute examinations.

### C.P.A. PROBLEMS

A 19-20 Prerequisites: A 9-10; A 11; A 17-18; L 1-2 Thirty-three sessions; 5 hours' credit.

This course provides a thoroughgoing and complete review of accounting theory and practice, and is intended primarily for those who contemplate taking the C. P. A. examinations. Practice in the classroom is provided under substantially the same conditions as exist in the C. P. A. examination room. Carefully selected problems, taken from C. P. A. examinations, in Accounting Theory and Practice are worked out in the classroom, and are supplemented by lectures, demonstrations, and test questions.

## DISTRIBUTION (D)

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*Marketing enters into and influences every field of business and includes not only the direct process of the sale of goods, but the whole organization by which goods find their way from the original producer to the ultimate consumer. The change in the economic structure during the past ten years growing out of higher standards of living, the development of new occupational interests, and the shift of population to large cities, has tended to increase the cost of marketing of goods. Just as the elimination of waste in production was the keynote of business fifteen years ago, the reduction of expense and the introduction of more efficient methods in distribution are the foremost thought of business leaders today. For this reason courses in marketing form one of the basic elements in a business education.*

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### MARKETING

D 1-2 Thirty-three sessions; 5 hours' credit.

An understanding of the various methods in common use for selling goods, and of the typical problems that arise in the course of distributing goods from the manufacturer through the middlemen and dealers to the consumers is provided. The selling problems of the manufacturer, the wholesaler, the retailer, and the specialty agent are studied in relationship to the various types of industries and commodities.

### PRINCIPLES OF SELLING

D 3 Seventeen sessions; 2½ hours' credit.

This course deals with the evolution of modern salesmanship, its history, development, and opportunities. The psychology of selling, preparation for the interview, the proper approach, arousing the buying urge, the meeting of sales resistance, the closing of the sale, and the qualities of good salesmen are among the topics discussed.

### SALES MANAGEMENT

D 4 Seventeen sessions; 2½ hours' credit.

This is a continuation of the course in the Principles of Selling. It includes study of the types of sales organizations, the work of sales executives, sales planning and policies, sales campaigns, management of the sales force, financing of sales, and the control of sales operations.

### PRINCIPLES OF ADVERTISING

D 5 Seventeen sessions; 2½ hours' credit.

A comprehensive course designed to familiarize the student with the nature and scope of advertising and its place in the commercial and economic structure. History, definition, and functions of advertising. Organization and functions of advertising departments and





*The efficient direction of goods to the consumer is the primary aim of business today*

advertising agencies. Varieties of advertising and media. Problems, market investigation, planning campaigns. Laws, ethics, and regulations. A study of the broader aspects of advertising with special emphasis on current trends and developments.

### RETAIL STORE ADVERTISING

D 7 Seventeen sessions; 2½ hours' credit.

This course is devoted to the study of the elements of retail advertising. The various media used by retailers are considered with drill in the preparation of copy therefor. A study is made of institutional, straight merchandise, and sales copy as exemplified in current advertising of important retail concerns. The principles of layout receive attention as well as the mechanics of production including art work, plates, typography, and printing. The aim is to furnish a practical foundation fitting students for a creative career in retail advertising.

## ENGLISH (E)

*The value that comes from the effective use of good English in business reports and communications is being increasingly emphasized by business leaders. All students who are candidates for the degree or certificate are required to pursue systematic courses in English. Those having outstanding deficiencies may be required to take additional courses in English.*

### BUSINESS ENGLISH

E 1-2 Thirty-three sessions; 5 hours' credit.

Efficient training is provided in the use of correct and forceful English for business purposes. Practice in the construction of sales, collection, credit and application letters, business articles, reports and newspaper stories provides opportunities for written expression on business topics. Study is devoted to the elements of logic as related to the organization and expression of thought. The course includes study of the fundamentals of sales promotion practice with special emphasis on buying motives. Oral work in class is intended to prepare students for participation in business conferences and public meetings.

### ADVANCED ENGLISH

E 3-4 Prerequisite: E 1-2 or equivalent. Thirty-three sessions; 5 hours' credit.

Literature of value and interest to business men forms the basis of study and practice in writing so as to develop an effective easy style of expression. The student acquires a cultural basis which will serve not only as a source of entertainment in leisure hours but also an aid for business communications.

### PUBLIC SPEAKING

E 5 Seventeen sessions; 2½ hours' credit.

Those who wish to speak convincingly, to overcome self-consciousness, and to develop self-confidence will find this course meeting their needs. Students are trained in the selection and organization of speech materials, the delivery of the speech, and in other important essentials of effective speaking. The entire course is practical and not theoretical. Work is centered around the interests and topics of business men and is specifically adapted to their needs.

### BUSINESS REPORTS AND CONFERENCES

E 6 Seventeen sessions; 2½ hours' credit.

This course is devoted to the preparation and presentation of business reports and to the techniques of planning for, participating in, and conducting business conferences. These reports and conferences are based upon business problems and situations. The nature of a thesis, the selection of a subject, the preparation of an outline, the collection and organization of data are considered in this course. Students are given the fullest possible opportunity to participate actively at each session.

### BUSINESS READINGS

E 7 and E 8; 2½ hours' credit for each course.

The two courses in Business Readings are designed to broaden the student's acquaintance with selected writings in the field of business and to introduce him to the real pleasure and values that come from such reading. There are no required lectures for these courses, each of which carries two and one-half semester hours' credit and for which a charge of ten dollars is made.

At the beginning of the Upper Middler and the Junior years, each degree candidate registers for a Readings course and is furnished a list of titles from which he makes selections for readings in accordance with the course requirements. Written reports are submitted on these readings, and are due on or before registering for classes the following year.

## ECONOMICS (Ec)

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*Economics is the basic foundation upon which the general principles of business as a science are founded. A mastery of the underlying economic laws enables the student to see clearly the forces which business men must use in arriving at solutions to their problems. An appreciation and understanding of economics is a necessary factor in the equipment of a progressive business man.*

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### BUSINESS ECONOMICS

Ec 1-2 Thirty-three sessions; 5 hours' credit.

The characteristics of modern business and industry are studied in terms of their operations and relationship to the modern economic system. Economic laws and principles are considered in terms of business conditions peculiar to our own time and country and how these laws govern prices, wages of labor, profits, credit, competition, work and working conditions, and rewards for business enterprise.

### FINANCIAL ORGANIZATION

Ec 3-4 Prerequisite: Ec 1-2 Thirty-three sessions; 5 hours' credit.

The functions and services of money and credit as mediums of exchange are discussed. A detailed study is made of the organization and functions of modern financial institutions such as commercial banks, trust companies, investment security houses, savings institutions, stock exchanges, the Federal Reserve System, and other credit and financial institutions.

### INVESTMENT PRINCIPLES AND PRACTICE

Ec 5-6 Thirty-three sessions; 5 hours' credit.

Consideration is given to the determination of investment policies and to the analysis of various kinds of securities such as types of bonds, preferred and common stocks, and their



place and use in the investment field. Attention is also given to the economic factors and changes as they affect investments.

### BUSINESS STATISTICS AND FORECASTING

Ec 7-8 Prerequisite: Ec 1-2 Thirty-three sessions; 5 hours' credit.

The objective of this course is to train the student to use statistics in making better analyses of the business problems than is possible without statistics. The point of view of the business man and not the professional statistician is maintained throughout the study. In the early part of the course the emphasis is placed upon the necessary technical methods, using business problems as illustrations; in the second part of the course, the point of view is changed and the emphasis is placed upon solving practical problems, using statistical methods as tools when necessary. The practical application of statistics to business is directed toward business forecasting, business budgeting, production and labor, market analysis, investment and financial analyses, and executive and management statistics.

### ECONOMIC DEVELOPMENT OF THE UNITED STATES

Ec 9 Seventeen sessions; 2½ hours' credit.

A broad general survey is made of the economic and industrial development of the United States from the colonial period to the present time. Emphasis is placed upon the origin and development of American industries, changes in industrial and commercial policies, economic forces at work in business and social institutions, and upon problems arising from the growth and development of business and industry in the United States.

### INTERNATIONAL ECONOMIC RELATIONS

Ec 11-12 Thirty-three sessions; 5 hours' credit.

A seminar course for advanced students in the field of economics. Current developments in international relations as they affect business in the United States are considered from an objective point of view. The student is taken behind the scenes of international relations to analyze the basic problems of economics, finance, and diplomacy involved. The effect of foreign policies upon business in the United States is studied.



Northeastern's New Building

## LAW (L)

*Underlying the ever increasing complexity of modern business is a growing body of law which defines and directs business operations. Except for Legal Aspects of Business, all law courses employ the case method of study used in the country's leading schools of law. The courses listed below are available in Boston. For courses in law offered by the Divisions, consult the Divisional Offices.*

### LEGAL ASPECTS OF BUSINESS

L 1-2 Thirty-three sessions; 5 hours' credit.

A study of the application of legal machinery to the current needs and demands of modern business for facilitating organization, credit, finance, security or protection from risks, marketing, and commercial and industrial peace. The course also provides excellent preparation for the law phase of the C.P.A. Examination.

### BUSINESS CONTRACTS

L 4-5 Thirty-three sessions; 5 hours' credit.

Their importance to the business man in the everyday conduct of his affairs; why contracts are necessary, how they are made and enforced; the subject matter of contracts, the rights and liabilities of the parties, the effect of failure to keep agreements, the effect of fraud, duress and mistake; the termination of the contract relationship.

### AGENTS AND AGENCIES

L 6 Seventeen sessions; 2½ hours' credit.

The importance of agents or business representatives in present-day business; how they are appointed; the legal relationships among agent, employer and third parties; the duration of the agency and the methods of terminating it.

### INSURANCE OF BUSINESS RISKS

L 7 Eleven sessions; 1½ hours' credit.

The kinds of risks business men must assume and how some of these risks may be shifted to others; the formation and operation of insurance contracts affecting such risks as fire, explosion, transportation, theft, employer liability, and interruption of business.

### TORTS AND CRIMES IN BUSINESS

L 8 Nine sessions; 1 hour credit.

The responsibility of the business man for such common torts and crimes as trespass, libel, slander, deceit, nuisance, and assault; precautions that may be taken to minimize claims against businesses arising from acts of the corporation, its officers or its employees.

### BUSINESS ORGANIZATIONS

L 10-11 Thirty-three sessions; 5 hours' credit.

Problems of organizing various businesses; the forms of business enterprises, such as sole ownership, partnership, and the corporation; the powers and liabilities of business organizations and their officers; inter-corporate problems; rights of creditors and stockholders; problems of reorganization and the termination of a business organization's affairs.

### LAW OF SALES

L 12 Seventeen sessions; 2½ hours' credit.

Formation of contracts to sell, the transfer of property rights, documents of title, risk of loss, rights and duties of buyer and seller, and remedies of the buyer and seller.

### TRADE REGULATION

L 13 Seventeen sessions; 2½ hours' credit.

Fair competition, price regulation, disparagement of competitor's goods, trade boycotts, trade secrets, trade marks and trade names, tying contracts, antitrust laws, the Federal Trade Commission and other governmental agencies.





*A section of the new University Library*

### **RIGHTS IN PRIVATE PROPERTY**

L 14-15 Thirty-three sessions; 5 hours' credit.

The nature and extent of ownership in personal property and real estate; rights represented by stocks, bonds, patent rights and copyrights; the acquisition of real estate, rights and liabilities of owners, business leases, the landlord and tenant relationship, the transfer of ownership.

### **TAXES AND TAXABLE INTERESTS**

L 16 Seventeen sessions;  $2\frac{1}{2}$  hours' credit.

Legal aspects of taxes as they affect the conduct of business; kinds of taxes, such as property taxes, excise taxes, and income taxes; appeals of taxpayers; the taxation of corporations.

### **LABOR RELATIONS**

L 17 Seventeen sessions;  $2\frac{1}{2}$  hours' credit.

The legal relation of employer and employee; the responsibility of employers for injuries, compensation legislation; competitive labor practices; unions, strikes, boycotts, blacklisting; modern legislation.

### **BANKING AND NEGOTIABLE PAPER**

L 18-19 Thirty-three sessions; 5 hours' credit.

Legal relations between customer and banker, duties of bank and depositor, collections, and bankers' liens. Legal devices for raising money and extending credit, such as promissory notes, bills of exchange, checks, trade acceptances, bills of lading, and warehouse receipts.

### **RIGHTS OF DEBTORS AND CREDITORS**

L 20 Seventeen sessions;  $2\frac{1}{2}$  hours' credit.

The property of the debtor which may be used for payment of his debts; modes of collecting on debtor's property; rights of creditors in bankruptcy and other legal actions.

## MANAGEMENT (M)

*With the complex and rapidly changing conditions of modern business, the functions of administration and management must be clearly defined and maximum economies effected. Through the problem approach, these courses train the student to supplant guesswork and trial and error processes with organized knowledge and proven management methods. Courses designated by the symbols M3, M4, M6, and M13-14 are offered in Boston only.*

### BUSINESS AND INDUSTRIAL MANAGEMENT

M 1-2 Thirty-three sessions; 5 hours' credit.

An introductory survey of the whole field of business and industrial administration with special emphasis upon training the student in the analysis of business and industrial problems. The functions of the business and industrial administrators are discussed with particular reference to the control policies and devices of the manager. The course presents the problems of business and industry as an interrelated whole and helps the student to see the lines of study which lead to solution of those problems.

### PRINCIPLES OF PRODUCTION

M 3 Prerequisite: M 1-2 Seventeen sessions; 2½ hours' credit.

A basic treatment of the fundamental manufacturing processes. Topics studied include: factory organization, manufacturing and assembly sequences, selection and co-ordination of productive facilities, product design, inspection and salvage.

### SCIENTIFIC MANAGEMENT

M 4 Prerequisite: M 3 Seventeen sessions; 2½ hours' credit.

The practical application of the principles of scientific management to production problems. The course embraces study in process research including time and motion study, standardization of materials, analysis of operations, methods of production, and production control including wage incentive systems.

### PSYCHOLOGY FOR BUSINESS AND INDUSTRY

M 5 Seventeen sessions; 2½ hours' credit.

Business psychology is the study of predicting and influencing human behavior in business. It provides an understanding of man's mental life, of how the individual and the group behave and are influenced in their behavior, and of how the business man may predict and control his own behavior and that of those with whom he works. The study and analysis of the student's own personal problems and behavior constitute a valuable and interesting phase of the course.

### PURCHASING

M 6 Seventeen sessions; 2½ hours' credit.

A practical study of the functions and duties of the purchasing agent, the organization and administration of his department, and his relations with other departments. The following are representative of subjects discussed: the purchasing function, qualifications of the purchasing agent, selection of supply sources, purchasing policies and budgets, cataloging information, testing and inspection of purchases, and stores control.

### CREDITS AND COLLECTIONS

M 7-8 Thirty-three sessions; 5 hours' credit.

This course furnishes instruction in the theory of credit, the workings of a Credit Department, whether in the wholesale or retail field, and in the analysis and use of credit statements as aids to efficient management.

### INDUSTRIAL MANAGEMENT PROBLEMS AND POLICIES

M 9-10 Prerequisite: M 4 Thirty-three sessions; 5 hours' credit.

Co-ordination of the functional relationships which exist between the different departments of business with the problems affecting the determination of administrative and managerial policies is the purpose of this study. Special attention is given to scientific management of industry and business and to the co-ordination of production with purchasing, sales, finance, and transportation. Cases and problems dealing with organization and expansion, consolidation and combinations, reorganizations, internal administration, industrial and human relations, and governmental control form the basis of discussion and study.



**GOVERNMENT CONTROLS IN BUSINESS**

M 11-12 Thirty-three sessions; 5 hours' credit.

A study of the economic and political relationships which exist between business and government with particular emphasis upon the work of the Interstate Commerce Commission and the Federal Trade Commission; also other government agencies including the U. S. Departments of Agriculture, Commerce, Labor, and particularly the Bureau of Labor Statistics. Social as well as economic aspects of government control will be considered.

**RETAIL STORE MANAGEMENT AND DEPARTMENT STORE ADMINISTRATION**

M 13-14 Thirty-three sessions; 5 hours' credit.

Devoted to a careful study and analysis of the fundamental principles underlying the successful operation of retail stores. Among the topics treated are store location, types of store organization, merchandise control, store systems, receiving, marking, delivering, expense control, problems of general policy; the administrative and executive problems of the larger retail merchandising institutions; the organization and operation of the various departments of department stores including merchandising, operating, publicity, customer service, internal service, and personnel.

**BUSINESS PLANNING AND RESEARCH**

M 17-18 Prerequisite: Ec 7-8 Thirty-three sessions; 5 hours' credit.

This course is devoted primarily to a study of economic and business planning and to the technique of research and study in relationship to planning. The fundamental principles underlying the solution of research problems will be analyzed and students will be required to apply those principles to specific problems involving planning and research.

**BUSINESS ADMINISTRATION SEMINAR**

M 19-20 Prerequisites: A 5-6, D 1-2, Ec 3-4, Ec 7-8. Thirty-three sessions; 5 hours' credit.

This course provides the unique opportunity to use the information acquired from other courses in an intelligent intimate discussion of live current problems which arise daily in marketing, production, and finance, with notes as to social significance. Emphasis is placed on the translation of problems out of the academic book atmosphere into the personal terms in which these problems must be met in business life and solved. Work is conducted upon a prepared individual conference basis.



*An appreciation of the problems of Management fits Northeastern men for quicker advancement*

## THESIS (T)

### BACHELOR'S DEGREE THESIS

T 3-4, 5 hours' credit.

Each candidate for the B.B.A. degree may submit a thesis or the Business Readings reports. The conditions to be fulfilled in connection with a thesis are:

1. The selection of the subject, preparation of the outlines, and the collection of data must be worked out in accordance with the requirements of the Committee on Theses.
2. Two typewritten copies of the completed thesis must be presented to the Dean, or the Director in the Divisions, not later than March 15 of the year in which the candidate expects to graduate.
3. The thesis is expected to meet the equivalent of the work required in a full-year course. It is expected to give evidence that its writer has made a thorough study of the subject or problem selected, that he has marshaled the data in a businesslike manner, and has given evidence of his ability to reach sound and reasoned conclusions, and to present his findings in clear and convincing terms.

## OCCUPATIONS (O)

The School considers that the knowledges, skills, and experiences acquired in the full-time employment of its students are the equivalent in many respects to the work carried on in a laboratory. For this reason all members of the three upper classes who expect to qualify for the Bachelor of Business Administration degree must meet the occupational experience requirements listed below.

In order that this occupational experience may have the maximum educational value, the School maintains a Department of Vocational Guidance and Placement under the supervision of a competent Director. It is the responsibility of this Department to assist those students:

- a. who need advice and guidance about employment in business;
- b. who are unemployed and need placement service, and
- c. who are already employed but need to change their present employment connections in order to obtain the greatest possible benefit from their training and experience.

There is no tuition charge for the occupational courses listed below, even though they are required for the degree. Furthermore, all services of the Department of Vocational Guidance and Placement are without charge to the student.

### ELEMENTARY OCCUPATIONS

O 1-2 10 hours' credit.

In this course students are required to meet with the Director of Vocational Guidance and Placement in groups or individually as he may direct, and to submit in the Upper Middler year a complete and detailed record of their employment for the college year. This report is one factor in evaluating the occupational experience credit of the student.

### INTERMEDIATE OCCUPATIONS

O 3-4 10 hours' credit.

A continuation of O 1-2. Continuing guidance under the supervision of the Director of Vocational Guidance and Placement. Consideration of psychological and economic factors affecting vocations; vocational objectives. A complete report of the employment of the Junior year is required.

### ADVANCED OCCUPATIONS

O 5-6 10 hours' credit.

A critical consideration of the student's present employment in the light of present-day occupational trends. Individual conferences with a view to vocational adjustments, if deemed desirable. A complete report of the employment of the Senior year is required.

# School of Business

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## *General Information*

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### **Classrooms and Libraries**

The classrooms are furnished with modern equipment and are thoroughly adapted to evening school work. Improvements in classroom facilities are constantly being made to meet the needs of the student body.

In connection with the General Library of the University in Boston a special section is devoted to books on business subjects. In addition, the leading trade and business magazines are available for student use. Additions are constantly being made to the business section of the Library in recognition of the new demands for business education and research. The reading rooms of the Library are open Monday through Friday from 8:45 A.M. to 10 P.M. They close at 1 P.M. on Saturdays and are not open Sundays and holidays.

All members of the School in Boston are entitled to the privilege of using the Boston Public Library including the Business Branch at 20 City Hall Avenue. The same privilege is accorded students in the Divisions for the use of the libraries in their respective cities.

Appreciable libraries to which additions are constantly being made are available in the Divisions at Springfield and Providence.

### **Textbooks and Supplies**

The Northeastern University Bookstore is a department of the University and is operated for the convenience of the student body. All books and supplies which are required by the students for their work in the University may be purchased at the Bookstore. In addition, the Bookstore also carries a large number of general supplies. In Boston the main store is situated in the basement of Richards Hall.

In the Divisions, stores are located adjacent to the School Offices.

### **Recreation and other Activities**

Men who are employed in offices or indoor occupations and who are pursuing a strenuous evening program of study should plan to take some systematic form of exercise in order that they may not impair their health and that they may do the most effective work.

Northeastern University is particularly fortunate in being able to place at the disposal of its students at moderate rates unexcelled recreational advantages. In Boston, the Y.M.C.A. building, adjacent to the University buildings, has facilities in the nature of gymnasiums, swimming pools, bowling alleys, billiard rooms, game rooms, and social rooms where students obtain recreational privileges to their liking. In the Divisions, classes are conducted in the Y.M.C.A. buildings. Students may, therefore, come from their work at the close of the day and enter a gymnasium class, take a swim, use the bowling alleys, or engage in other recreational pastimes before class time and thus renew their energy for the evening's work.

In addition, in the program of the various Young Men's Christian Associations will be found ample opportunities for religious, club, and other social activities.



### Student Council

The social and extracurricular life of the School is in charge of Student Councils consisting of representatives from each class or school group. In addition to arranging for occasional social affairs, special lectures, and meetings, the council represents the interests of the student body. The faculty and the officials advise with the council in regard to school policies.

### Honor Fraternity

Sigma Epsilon Rho, the honor fraternity in the School of Business, has chapters in Boston and Providence. Its purposes are:

To promote acquaintance and good fellowship among those men who have attained highest scholastic standing in the School.

To stimulate the student body to higher scholastic accomplishment through the bearing, influence, and work of these selected men.

To develop methods of mutual improvement and advancement among the members of this fraternity.

To support high moral, professional and scholastic ideals.

Only students with honor standing are admitted to the fraternity. Admission is by invitation, after nomination by the School faculty.

In Boston an outstanding business book is awarded each year by Sigma Epsilon Rho Fraternity to the highest ranking student for that year in each of the Sophomore, Lower Middler, Upper Middler, and Junior Classes. Students will receive the award only in the event that they enroll for the subsequent year.

### Scholarships, Awards, and Loan Funds

#### In Boston

The following scholarships and awards are available to students enrolled for a normal schedule of fifteen or more semester hours of class work who are pursuing a degree or title program in the School of Business in Boston. One-fourth of the scholarship is applied to the tuition of the recipient at each quarterly payment.

#### SCHOOL OF BUSINESS HONOR AWARDS

A half tuition scholarship award is made each year to the highest ranking student of that year in the Junior, Upper Middler, Lower Middler, Sophomore and Freshman classes, who re-enrolls the following year for a normal schedule of study.

A quarter tuition scholarship award is made each year to the second highest ranking student of that year in the Junior, Upper Middler, Lower Middler, Sophomore and Freshman classes, who re-enrolls the following year for a normal schedule of study.

To be eligible for either a half or a quarter tuition honor award, a student entering the School with advanced standing credit, except by examination, must have completed at least thirty semester hours of classroom work at the time the award is made.



### THE CLARKSON-ALUMNI SCHOLARSHIP

This scholarship, made available through the generosity of the Alumni Association of the School of Business in Boston, is in memory of George S. Clarkson, a member of the Class of 1914 and an instructor in accounting for many years. This scholarship, which is indeterminate in amount, is granted to the student who obtains the highest final grade in the course in Auditing unless he is eligible for an award of greater monetary value in which event the Clarkson-Alumni award will be made to the highest ranking student in Auditing who is not eligible for such an award. To be eligible for this scholarship the student must pursue a normal schedule the following year.

### KAPPA TAU PHI SCHOLARSHIP

This scholarship award, amounting to thirty dollars, is made available by the Kappa Tau Phi Sorority. It is granted annually to the woman student who ranks highest in her class at the end of the Sophomore year unless she is eligible for an award of greater monetary value in which event the award will be made to the highest ranking woman student who is not eligible for such an award. To be eligible for this scholarship the student must pursue a normal schedule the following year. In determining this award grades of all courses completed in the Freshman and Sophomore years shall be considered.

### ALUMNI LOAN FUND

The Alumni Association of the School of Business in Boston has provided a loan fund which is available to students in the Senior and Junior classes in Boston who are in need of financial assistance in order to continue their studies. Applications for loans should be addressed to the Dean of the School. All applications must be approved by the Alumni Loan Fund Committee.

### SCHOOL OF BUSINESS LOAN FUND

By vote of the Student Council a part of the Student Activities fees for 1937-1938 was set aside to provide a loan fund which is available to students temporarily in need of small loans for tuition or other School charges. Students needing assistance from this fund should confer with the Dean who administers it.

### In Springfield Division

The following scholarship and loan funds are available to students applying for, or admitted to, curricula offered by the Springfield Division of the University:

#### JUNIOR SCHOLARSHIP

A scholarship of \$25 applicable to tuition of the next year is awarded annually at Commencement to that student of the Junior Class who has made the highest average grade in all courses from his Freshman to Junior years inclusive. The scholarship is donated by Delta Chapter of the Pi Tau Kappa Fraternity.

#### MIDDLE SCHOLARSHIP

A scholarship of \$25 applicable to tuition of the next year is awarded annually at Commencement to that student of the Middle Class, School of Law, or to the Lower Middle Class, School of Business, who has made the highest average grade in all courses of the first three years. The scholarship is donated by Sigma Nu Upsilon Sorority.

### SOPHOMORE SCHOLARSHIP

A scholarship of \$25 applicable to tuition of the next year is awarded annually at Commencement to that student of the Sophomore class who has made the highest average grade in all courses of the first two years. The scholarship is donated by Alpha Chapter of the Epsilon Phi Sigma Fraternity.

### FRESHMAN SCHOLARSHIPS

Awards in multiples of twenty dollars toward Freshman tuition are available to applicants for admission. They are made upon the basis of academic excellence for, and at the termination of, the required previous academic training. One of these is granted to that student who, of the first ten in average for the school or college, as the admission requirement may necessitate, shall stand highest of the number from that institution who applied for admission in the subsequent fall to Northeastern University, Springfield Division.

### STUDENT AID FUND

A limited fund originated by thoughtful undergraduates, augmented by certain faculty support, and the balance in a given year from student activities fees, from which meritorious students may obtain loans from time to time for tuition usage. It is administered by the Director of the Division. Applications for aid should be made through the Bursar.



*A quiet corner in the new Library*



# School of Business

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## *Administrative Policies*

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### Requirements for Admission

All applicants whose credentials are approved by the Committee on Admissions, and who are admitted for degree or other programs are classified as regular or conditioned students.

#### Regular Students\*\*

Applicants for admission as regular students must present evidence of the completion of an approved secondary school course, or the equivalent 15 units.\*

#### Conditioned Students\*\*

Applicants at least 21 years of age or those who will attain their twenty-first birthday during the college year and who do not meet the requirements for admission as regular students may be admitted as conditioned students provided they present satisfactory evidence of ability to profit by the work of the School.

Conditioned students may remove their admission conditions and be re-classified as regular students by using *a*, *b*, *c*, or a combination of *a* and *b*.\*\*

- a*. By applying courses which they have completed in the School of Business or in another approved college or university at the rate of one unit for each two and one-half semester hours. A course cannot be credited both for the removal of admission conditions and for the degree.
- b*. By applying units for work completed in an approved secondary school, or for work certified by an accredited certifying agency.
- c*. By action of the Committee on Admissions based upon all factors affecting the achievement and ability of the student in the School, when the student shall have completed the first thirty semester hours of work in his program; provided this work shall have been completed in not less than three years of attendance and with an average grade of not less than 70%. All conditioned students are required to take prescribed aptitude tests during the first year of attendance. These tests, for which no specific preparation can be made, are designed to test intellectual capacity and general fitness for college work rather than preparation in the specific subject matter of a secondary school program.

### Advanced Standing

Advanced standing credit in the School may be obtained in one or both of two ways, as follows:

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\* A unit represents a year's work in any subject in any approved secondary school constituting approximately a quarter of a full year's work, or the equivalent. A four-year day high school course is regarded as representing at least 15 units of work, or 3 units in junior high school and 12 units in a three-year senior high school.

\*\*For additional requirements for the Engineering and Business curriculum in the Springfield Division, consult special bulletin or the Divisional office.

**By Transfer of Credit.** Subject to the approval of the Committee on Education, credit may be given for work completed in other approved schools, colleges, and universities. Applicants desiring credit by transfer should indicate their desire at the time the application for admission is filed. A copy of the catalog of the institution from which the transfer is sought should accompany the application for admission.

**By Examination.** Applicants who desire to secure advanced standing credit by examination are required to apply in writing for examination in those subjects for which credit is sought. Proper forms should be obtained from the School Office and filed at the time the application for admission is filed. Applications for examinations are approved by the Committee on Education which will take into account previous training, business experience, and other factors showing the applicant's special preparation and ability in the subject or subjects in which credit is sought by examination.

A grade of 75% must be obtained in an examination in order to secure advanced standing credit for the subject. Upon successfully passing an examination, the applicant may be given full credit as though the subject had been pursued in the School, or may be excused from the subject and permitted to select an elective course in lieu thereof.

The same subject cannot be offered both for admission credit and as a basis for advanced standing.

### Registration

Before attending classes, students should report at the School Office for registration. Students are requested to assist in lessening congestion during the opening week by registering during the two weeks previous to the opening of the School.

Late registration for those unable to enter at the opening of the School year will be permitted at the discretion of the Dean, or the Director in the case of the Divisions.

### Class Sessions

In Boston and Springfield classes are held each evening of the week except Saturday. In Providence, classes are held on Monday, Wednesday, and Friday evenings. *The normal schedule for students pursuing a degree, title, or certificate program is three evenings a week. Students may arrange their schedules so as to attend classes one, two, three, or four evenings a week depending upon the number of subjects taken.* Students interested in the schedule of classes of any particular city should apply to the office of the school in the city in which they expect to attend.

### Notify the Office Immediately

Of change of address.

Of withdrawal from any course — otherwise the fee for that course will be charged.

Of withdrawal from the School, giving date of the last session attended.



### Attendance

The limited amount of time devoted to each subject and the rapid rate of progress in covering the essential content of a course make it highly desirable that students be present at every session. Because of the importance of regular attendance and its bearing upon the quality of scholarship, the policies governing attendance are:

Students who attend 75% or more sessions in a course are entitled to pass in that course if they attain a minimum final grade of D.

Students who attend between 50% and 74% of the sessions in a course are entitled to pass in that course if they attain a minimum final grade of C. Those who do not attain the minimum required grade of C may remove the condition only by means of a make-up examination in which they must receive a mark sufficient to raise the course grade to C.

Students who attend less than 50% of the sessions in a course will be considered ineligible to take the final examination or to receive any credit for the course.

Attendance credit is granted only when the student is in attendance at least three-quarters of the class period. Three separate absences of less than 30 minutes each constitute one complete absence unless such partial absences are canceled by satisfactory excuses.

### Outside Preparation

It is expected that students will devote on the average two hours to preparation for each hour spent in the classroom. A student carrying a normal program of three evenings a week will, therefore, be expected to devote to outside preparation an average of eleven to twelve hours a week. Some courses require more time for preparation than others.

### Regular Examinations

The general policies governing regular examinations are:

A final examination will be held at the end of each course unless an announcement to the contrary is made.

The minimum passing grade in a regular final examination is D.

In case a student is excused from a final examination by the Dean or Director, he may take the next regular or conditioned examination in the subject. The student who fails to complete a course within one year from the termination of that course must repeat the course, except that in special cases for justifiable cause, the Committee on Education may waive this rule.

The student who has received a passing mark in a final examination and in a course may not take another examination for the purpose of raising his grade unless he repeats the course in its entirety.

### Condition Examinations

The following policies govern re-examinations:

Permission for taking a make-up examination is dependent upon the quality of the work which the student has done throughout the course and is a privilege which the Committee on Education may grant to students who have received an E grade or an incomplete (Inc.).

The condition or make-up examinations are given in September. Students should consult the School Office for the specific dates of each examination.

Only one make-up examination in any given subject is allowed for the purpose of removing a conditional failure.

A make-up examination for purposes of removing a condition or an incomplete grade must be taken within the next school year. In such cases students may take either the examination at the condition examination period or the final examination when next given if within a period of one year. A fee of \$2 is charged for each School of Business examination taken out of course.

A minimum grade of 65% is required on each make-up examination unless a higher minimum is specified.

Whatever grade the student obtains on the make-up examination is credited as the final examination grade, but in no case can the final grade in the course be more than 70% except in the case of students who have been excused from taking the regular final examination.

### Tests

Four tests in full-year courses and two tests in half-year courses are regularly scheduled. These tests are regarded as a part of the term or course work. Since no make-up tests are given, students who miss a test should confer with their instructors regarding their status.

### Marks and Credits

The following system of grading is in use:

Superior Work, A; Above Average Work, B; Average Work, C; Lowest Passing Grade, D; Unsatisfactory Work, E; Failure, F; Incomplete, Inc.

Students receiving an E, or unsatisfactory work grade, in an examination or as a final grade in the course, may remove the unsatisfactory grade by taking a make-up examination when it is next given, or at the time of the conditional examinations in September. The minimum passing grade of 65% is required on the make-up examination, unless a higher minimum is designated. In no case will a student taking a make-up examination be allowed more than a C for a final grade even though a higher grade may be obtained.

Students receiving an "F" grade in a course must repeat the course in its entirety including term work, examinations, and attendance.

The policy is followed of mailing all grade and status reports to students instead of issuing these reports at the School Office or over the telephone.

A passing grade in a final examination as well as a passing final grade in the course is necessary in order to receive credit in the course.

Credit for one-half of a full-year course is not generally given, and in any event only upon approval by the Dean in advance of beginning the course.

In order to qualify for a degree, title, or a certificate the student must maintain a general average of C for the entire program. This is not interpreted to mean that each course must be passed with a grade of C, but that the average of all courses must be at least C. Grades of courses credited by transfer or by examination are not included in computing averages.

### Graduation with Honors

Honors are based upon the excellence of the work performed by the students in the School. Three honorary distinctions are conferred upon properly qualified candidates for the bachelor's degree upon graduation:

Highest honors to those who have completed all work with an average of 95% with no grade less than C.

High honors to those who have completed all work with an average of 90% with no grade less than C.

Honors to those who have completed all work with an average of 85% with no grade less than C.

These honors are subject to further conditions as follows:

To be entitled to honors a student must have completed a minimum of two full years of study in the School.

Courses credited by advanced standing whether by transfer or by examination will be eliminated in determining honors.

### Probation and Discipline

The Committee on Education in dealing with students whose work in the School may be unsatisfactory or whose conduct is such as to make it inadvisable for them to continue as members of the student body, considers each case upon its individual merits. The following general principles are kept in mind in handling such cases:

Students whose scholarship in any given year is unsatisfactory may be dropped from the School or may be placed on probation with the privilege of spending a year in review.

When a student is placed on probation, the probation is formally imposed for a definite time and can only be extended by approval of the Committee on Education.

This Committee has the authority to dismiss from the School or place on probation at any time or to strike off from the list of candidates for the degree, any student whom it may deem unworthy either on account of unsatisfactory scholarship or for any great defect of conduct or character. The Committee may ask any student to withdraw from the School who is obviously out of sympathy with the aims and ideals of the School.



# School of Business

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## *Tuition and Other Fees*

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### **Matriculation Fee**

The University matriculation fee of \$5 must accompany the initial application for admission to the University. This fee is not refundable.

### **University Fee**

All students enrolled in the School of Business are charged a University fee based on the number of semester hours for which the student is enrolled. The charge is 70 cents a semester hour of classroom work, but not exceeding \$10 in any one year. This fee covers in part Library, general materials, general university service charges, and similar items for which separate fees are frequently charged by other colleges and universities. It is payable by all students regardless of date of admission or the curriculum in which they are enrolled. For students enrolled for the entire year, the University fee is payable one-half when the student enrolls in September, and one-half with the January payment. If enrollment is for a single semester, the fee is payable with the first payment of the semester.

### **Tuition Fees**

Tuition fees for courses in the School of Business are based on a charge of \$8 a semester hour.

### *Complete Programs*

A student carrying a normal program of three full-year courses throughout the school year will complete fifteen semester hours of work for which the charge is \$120. This charge is payable in four payments of \$30, the first being due during the opening week of school and the other three during the weeks of November 16, January 18, and March 8.

### *Single Courses*

The charge for each half-year course carrying two and one-half semester hours' credit is \$20, payable in two payments of \$10, and for each full-year course carrying five semester hours' credit, \$40, payable in four payments of \$10, except that payment for any course completed in one semester must be made during the semester in which the course is completed.

### *Deferred Payment Privilege*

Students who would be denied the advantages of a systematic education if required to meet the tuition payments in the manner specified above, may make other payment arrangements with the Dean, if attendance is in Boston, or with the proper Divisional officer, if attendance is in one of the Divisions. A nominal charge is made for this service.

### *Courses in Other Departments of the University*

School of Business students assigned to courses in other departments of the University are charged the tuition rates and other fees effective in the departments to which they are assigned.



### Late Registration

No reduction in tuition is made for late registration. A student is neither entitled to classroom privileges nor considered as registered and enrolled until tuition due has been paid or satisfactory arrangements made in person with the Dean, if attendance is in Boston, or with the proper Divisional officer, if attendance is in one of the Divisions.

### Student Activities Fee

An activities fee is charged all students on the following basis:

\$1 for students enrolled for courses not exceeding five semester hours.

\$2 for students enrolled for courses exceeding five semester hours.

The fee is payable during the opening week in September. Students registering in the second semester pay the fee at the time of registration. It is administered by the University authorities in the interest of the students, and is used primarily to promote extra curricular activities.

### Other Fees

A fee of \$2 is charged for each make-up examination or advanced standing examination. This fee must be paid on or before the date of the examination.

A fee of \$10 is charged for each of the Business Readings courses. One-half is payable with the November tuition payment and one-half with the March tuition payment. This fee applies only to those who elect to submit Business Readings in lieu of a thesis, and is payable ordinarily during the Upper Middler and Junior years.

A thesis fee of \$20 is required of all degree candidates who elect to write theses. This fee is payable upon presentation of the thesis which is due not later than March 15 of the year in which the student expects to receive the degree.

The University graduation fee, charged to those who are candidates for a degree, is \$10, payable on or before May 1st of the year in which the student expects to graduate. A fee of \$5 is charged to all candidates for a title or certificate and is payable on or before May 1st of the year the program is to be completed.

### Expense for Books and Materials

Students purchase their own textbooks and working materials. The cost varies according to the subjects for which the student is enrolled. The average cost for a normal program of three subjects is about \$13, with a maximum of approximately \$20. The textbooks for single courses range from \$1.25 to \$5.

### General Financial Information

Checks should be drawn payable to Northeastern University.

Students who have withdrawn from a course for good cause and who are permitted to repeat it are credited with the tuition previously paid on that course, provided they re-enroll for the same course within the next two college years. The credit cannot be applied, however, until the balance due on the course has been paid.

Students are not permitted to attend class sessions or take any examinations or tests until they have paid their tuition fees or have made satisfactory arrangements for payments.

Students will not be advanced in class standing, or permitted to re-enroll in the University, nor will degrees be conferred until all financial obligations to the University have been met.

No certificate of honorable dismissal will be issued to any student who has not fully met his financial obligations to the University.

### Withdrawals and Refunds Policy

In the event a student is obliged to withdraw from the School in which he is enrolled for causes deemed adequate by the Committee on Withdrawals, the balance of the tuition paid after the following deductions have been made will be refunded:

- a.* Four per cent of the total yearly tuition charge shall be deducted for each week of attendance or fraction thereof, in the event of enrollment for a full school year.
- b.* Ten per cent of the total tuition charged shall be deducted for each week of attendance or fraction thereof, in the event of enrollment for a semester.

The amount of tuition to be charged in the case of withdrawals shall be computed as indicated under *a* and *b* above from the date of each quarterly payment.

Matriculation, examination, thesis, and other fees are not refundable except that graduation and certificate charges will be refunded in case of non-qualification.

No refunds are granted unless the application for withdrawal is filed within forty-five days after the student has ceased attendance.

# School of Business

## Degrees Conferred in 1941

### Boston

#### Bachelor of Business Administration

EDWARD WILLIAM BANKOFF  
CHARLES SYDNEY BARTON  
ARTHUR KENNETH BEATON  
DELBERT BOUCK  
JOHN PATRICK DOYLE  
ROBERT ERNEST ELLIS  
WINNIFRED JOSEPHINE ERICKSON  
FRANK LOUIS FERRARESI  
JOSEPH FLAHERTY  
LOUIS HENRY FRITSCH  
JOSEPH CHARLES GEMELLI  
WALTER WILLIAM GLOWACKI  
JACOB MARVIN GORDON  
GEORGE STEWART GREENE  
LENNARD CARL HALL  
NUBAR HANJIAN  
ERNEST CHESTER JOHNSON  
KATHRYN ANNE KENNEDY  
GEORGE ANTHONY LANDRY

LENNART JOHN LARSON  
LEONARD GILBERT LAUZON  
FRANCIS LEO MANNIS  
CLIFFORD ORLAND MASON, JR.  
RICHARD JOSEPH MASUCCI  
JEROME FRANCIS MCCARTHY  
HENRY JOSEPH MCDADE  
WARREN WILLIAM MORRIS  
RICHARD FRANCIS MURPHY  
JOSEPH PATRICK MURRAY  
JOSEPH ANTHONY O'BRIEN  
OSCAR ALBERT OLSEN  
MANFRED GIACOMO PASTORE  
CLARK ALTON RICHARDSON  
SAUL RUBIN  
JAMES RUSSELL SMITH  
WILLIAM EDWARD TURKINGTON  
ROBERT JOHN WEAVER  
WILLIAM HENRY WEST

ERNEST AUGUST WESTER

#### With Honor

WILLIAM KIDD

WINSTON ALBERT KULLBERG  
DOROTHY WADSWORTH OLIVER

### Springfield Division

#### Bachelor of Business Administration

ZABYDA ABIHIDER  
WILLIAM FREDERICK BUCKLEY  
HOMER THEODORE DOMAINGUE  
ELIZABETH AGNES EASSON  
CHARLES HENRY FRUEH  
LEO FRANCIS GALLIVAN  
FRANK STANLEY JAMRO

ROBERT LOUIS MATTHEWS  
RAYMOND STEWART MCCLENAGHAN  
FRANCIS JAMES MCGRATH  
CARL HARRY NYSTROM  
ANGUS SCOTT PHILLIPS  
STUART REYNOLDS  
OSCAR SELDIN

GUSTAVE HERBERT SUHM

#### With Honor

LOUIS SEARLEMAN

### Providence Division

#### Bachelor of Business Administration

JOHN JAMES AUBIN  
JAMES WILLIAM DICKERSON  
GEORGE JOSEPH LETOURNEAU

HENRY ABRAHAM NESBITT  
DONATO EGIDIO PETTELLA  
FRANK HENRI SOUTER

JOHN FRANCIS WHITE

#### With Honor

LAFAYETTE ALBERTO HAYS

ALEXANDER HEDLEY HIRST  
JOHN KENTON SPEEL

# School of Business

## Register of Students, 1941-42

### Boston

ABRUZZESE, ALBERT E.	Wellesley	CHURCH, CHARLES H.	Medford
ACQUAVIVA, SAMUEL J.	Roslindale	CIAMPA, FRED A.	East Boston
ADAMS, HOWARD H.	Dorchester	CIAMPI, FRANCIS A.	Cambridge
AGABABIAN, HAIG H.	Dorchester	CICCHETTI, ARTHUR E.	Beverly Farms
ALLBEE, ABBOTT G.	Boston	CLARK, GEORGE J.	Lowell
LL.B., Suffolk University		CLARK, LAWRENCE J.	Dorchester
ALLEN, RAYMOND P.	North Quincy	CLARK, ROBERT D.	Cambridge
ALMGREN, EDITH D.	Milton	CLARK, WILLIAM H.	Waltham
AMIRAUT, REGIS J.	Lynn	CLARKE, DONALD G.	Revere
ANDERSON, ALFRED F.	Hyde Park	CLARKE, JULIA B.	Dorchester
ANDERSON, FRANK T.	Medford	CLAYTON, GEORGE R.	Methuen
ANDERSON, FRED L.	Beverly	CLIFFORD, DANIEL F.	Boston
ANDERSON, KENNETH W.	Watertown	CLIFFORD, JOSEPH L.	Kendal Green
ANDERSON, ROY C. A.	Hyde Park	B.B.A., Northeastern University	
ANTONELLIS, JOSEPH L.	Newton	COFFEY, JOSEPH D.	Watertown
AVERSA, PATRICK M.	Boston	COFFIDIS, JOHN J.	Brighton
		COHEN, BERTRAM L.	Dorchester
BABIN, EDWARD J.	Dorchester	COLE, WILLIAM J.	Lynn
BAILEY, GEORGE J., JR.	Lynn	COLKER, NORMAN L.	Mattapan
BAKER, HARRY D.	Natick	COLPITTS, WILLIAM K.	Beverly
BAKER, STANLEY F. JR.	Boston	COLT, CHARLES M.	Saugus
BALDASSINI, FRANCIS J.	Quincy	B.S., Boston University	
BALDWIN, GEDNEY H.	Belmont	CONDITO, ROCCO J.	Hingham
BAND, CHANNON	Cambridge	CONNOLLY, JOHN E.	Brookline
BARRESE, EDWIN G.	Somerville	CONNORS, JOHN C.	Quincy
BARRETT, CHARLES E.	Arlington	CONTRADA, ANDREW F.	Medford
BATES, PAUL C.	Brookline	COOK, HERBERT E.	Jamaica Plain
BECKETT, ARTHUR E.	Medford	COOKSON, LEROY B.	Melrose
BELBIN, CALVIN H.	Cambridge	COOLEY, ELEANOR L.	West Somerville
BELBIN, THEODORE, JR.	Cambridge	COONEY, JOHN E.	Newport, R. I.
BELINSKY, HARRY L.	Boston	COOPER, WALTER C.	Ipswich
BENEDICT, DANIEL	Everett	COPLEY, HELEN M.	Canton
BENJAMIN, JOHN P.	Boston	CORCORAN, J. FRANCIS	West Somerville
BERGER, IRVING E.	Chelsea	CORCORAN, THOMAS E.	Cambridge
BERKOWITZ, MELVIN	Dorchester	COSTELLO, JOHN R.	Winthrop
BETLEY, WALTER P.	Roxbury	COTTER, JAMES W.	Dedham
BIELAWSKI, EDMUND J.	Dorchester	COURSEY, C. HOMER	Brighton
BLACKMAN, MILTON	Allston	CRONIN, JAMES A.	Lynn
BLASS, ELIOT D.	Roxbury	CRONIN, JAMES J.	Dorchester
BLAYER, BENJAMIN	Roxbury	CROWTHER, NORMAN B.	Boston
BLONDELL, ROY L.	Milton	CUMMINGS, ARCHER F.	Boston
BOEGNER, KENNETH L.	West Newton	CURRAN, MARTIN F.	South Boston
BOETJE, GERARD H.	Dedham	CUSTANCE, ROBERT W.	Lexington
BORDEN, RAYMOND E.	Arlington	CUSTEAU, GERARD A.	Lowell
BORRIELLO, VICTOR R.	Somerville		
BOWES, FREDERICK T.	Somerville	DABOURAS, JAMES G.	Marlboro
BRADBURY, ROY S.	Allston	DAGINIS, CHARLES	Somerville
BRADSHAW, DANIEL A.	Brookline	DAHLBY, MILDRED A.	Quincy
BREWER, EDWIN O.	Boston	DANGIO, LOUIS	Waltham
BRICK, HARRY A.	Boston	DANNER, FREDERICK S.	Whitman
BRIDGHAM, ALBERT F.	Braintree	DANTZKER, PHILIP F.	Lynn
BRODECKI, ANDREW A.	Medford	DAVENPORT, EDWARD B.	Newton Center
BROWN, DAVID N.	Lynn	DAVENPORT, EDWIN H.	Belmont
BROWNE, WALTER C.	Cambridge	DAVIDSON, MILDRED	Mattapan
BRUNET, ROLAND A.	Lowell	DAVIS, MARJORIE	Brookton
BRUNSELL, GEORGE A.	West Roxbury	DAWSON, ISABEL D.	Cambridge
BUCHANAN, ESTHER E.	Roxbury	DEANGELIS, RALPH R.	Roslindale
BUNTEN, ANDREW D.	Watertown	DECROSTA, JOSEPH M.	Cambridge
BURDEN, HENRY J.	Dorchester	DELANEY, JAMES B.	Natick
BURNETT, LESTER J.	Malden	B.B.A., Northeastern University	
BUSHEY, CHARLES E.	Waltham	DENAHY, JOHN F.	Lynn
BUSHEY, ESMONDE J.	Waltham	DESBIENS, DONALD J.	Lawrence
BUTTRICK, WILLIAM R.	Cambridge	DIRENSKA, GLADYS T.	Lowell
		DINAPOLI, DONALD E.	Woburn
CALLAHAN, FRANCIS J.	Somerville	DISABATINO, CHARLES A.	Everett
CALVERT, WILLIAM C.	Brighton	DIVIRGILIO, JAMES V.	East Lynn
CAMMARATA, CHRISTOPHER J.	Arlington	DOBRIKAS, STANLEY D.	South Boston
CAMPBELL, PAUL V.	Roxbury	DOLIBER, RICHARD	Newton Highlands
CASAVANT, ROBERT H.	Beverly	DONOVAN, JAMES J.	Watertown
CASEY, FRANCIS M.	Brookline	DOYLE, DONALD C.	South Easton
CASEY, JAMES C.	Brighton	DOYLE, FRANK J.	Cambridge
CASEY, JOHN F.	Boston	DRISCOLL, JOHN F.	Hyde Park
CAVANAUGH, JOHN W.	Newtonville	DUNLAP, SEDLEY F.	Lexington
CELI, ANTHONY B.	Milton	DUNN, RUSSELL F.	Peabody
CHADWICK, WINSLOW J.	South Boston	DUPRAS, CAROL E.	Lowell
CHASE, ERLE L.	Watertown	DWYER, JOHN J., JR.	Haverhill
CHASE, HARRY C.	Weymouth	DYSON, EDWARD	Milton
CHICKERING, DONALD E.	North Quincy	DYSON, JAMES H.	Milton



EAGERMAN, A. CHARLES	Roxbury	HAUSMAN, GEORGE	Newton
EAGERMAN, FRANK	Dorchester	HAWES, RICHARD F.	Milton
EARLE, GORDON R.	Cambridge	HAYES, DONALD P.	Somerville
EDDY, ELMER B.	Providence, R. I.	HENLEY, LAURIE G.	South Weymouth
EGGERS, EARL H.	Framingham	HENRY, ROBERT P.	Belmont
EISNER, HARRY F.	Belmont	HERMAN, SIDNEY	Roxbury
ELDRIDGE, MARCHANT W.	Boston	HICKOX, SAMUEL A.	Jamaica Plain
EMBREE, ADDIE P.	Revere	HILL, ARNOLD	Belmont
EMIG, EDWARD W.	Boston	HILL, EVERETT R.	Cambridge
ERBE, GUSTAVE, JR.	Waltham	HOGAN, ROBERT L.	Woburn
ERICKSON, CARL E.	Everett	HOLLAND, ROBERT J.	South Boston
EVERSON, LEIGHTON R.	Quincy	HOLLEMAN, GEORGE W.	Arlington
		HOPFE, JUSTIN G.	Newton
FANTASIA, FRANCIS J.	Watertown	HOPKINS, WARREN W.	Beverly
FARRELL, MATTHEW F.	Lynn	HOULAHAN, JOHN H.	Milton
FEATHERSTON, CHARLES M.	Newton	HOULDSWORTH, FRANK	Lynn
FEINGOLD, JOSEPH H.	Marblehead	HOWARTH, BURTON G.	Waban
B.A., M.A., Clark University		HOY, THOMAS S.	Beverly
FERGUSON, JOSEPH W.	Roslindale	HUGHES, RICHARD J.	Boston
FINE, LEONARD	Chelsea	HULBERT, L. WILLIS	Melrose
FIORE, ALFONSO R.	Winthrop	HUNT, J. ROGER	Boston
FLAHERTY, CATHERINE M.	Boston	HUNTER, JOHN D.	Brookline
FLAHERTY, WILLIAM G.	Cambridge	B.B.A., Northeastern University	
FLANAGAN, GEORGE S.	North Andover	HUTCHINGS, ALBERT R.	Newton Highlands
FLEWELLING, WILLIAM L.	Winchester	HUTCHINGS, LAWRENCE A.	Watertown
FOOT, EDWIN H., JR.	Boston	HVOSLEF, ARTHUR M.	Hyde Park
FORD, CHARLES W.	Canton	HYDER, PHILIP N.	Boston
FOREST, RICHARD P.	Lynn		
FORTUNE, EDWARD M.	Framingham	IALUNA, ANGELO J.	East Boston
FRADES, FRED I.	Brighton	INGALLS, ROBERT N.	Mattapan
B.S., Boston University		INMAN, GEORGE P.	Dorchester
FRADKOFF, HERMAN	Dorchester		
FRANCIOSE, HENRY A.	Boston	JACKSON, ROBERT H.	Malden
FRANCO, SALVATORE M.	Roxbury	JACKSON, ROBERT W.	Melrose
FRANK, LEO	Boston	JAHNIG, ARTHUR J.	Boston
FRASER, WILLIAM G.	South Boston	JANES, GORDON B.	Cambridge
FREDERICKS, HENRY J.	Boston	JENKINS, WALTER W.	Malden
FRIED, FRED P.	Lynn	JEWELL, FRANCIS L.	Framingham
		JOHANSEN, ARTHUR W., JR.	Somerville
GALLIVAN, JAMES	Framingham	JOHNIDES, CONSTANTINE J.	Boston
GALLO, PATSY D.	East Boston	JOHNSON, CARL E.	Arlington
GARABEDIAN, JOHN S.	Holbrook	JOHNSON, DANIEL P.	Swampscott
GARBARINO, VINCENT J.	Dorchester	JOHNSON, ERNEST C.	Dorchester
GARR, STUART L.	Dorchester	LL.B., Northeastern University	
GAUDET, EDWARD C.	Ipswich	B.B.A., Northeastern University	
GIFFEN, RONALD H.	Somerville	JOHNSON, GEORGE E.	Milton
GILBREATH, VIRGIL L.	Dorchester	JOHNSON, HERBERT G.	Providence, R. I.
GILES, FREDERICK A., JR.	Milton	JOHNSON, LAWRENCE G.	East Lynn
GINSBURG, CARLETON	Brookline	JOHNSON, LEONARD V.	Swampscott
GIULIANO, ROSARIO A.	Waltham	JONES, ALTON T.	Cambridge
GLICKMAN, MAURICE	Roxbury	JONES, WENDELL R.	Cambridge
LL.B., Northeastern University		JOYCE, JOSEPH S.	Jamaica Plain
GLUCKERT, JOSEF J.	Beverly Farms		
GOLDING, RALPH	Mattapan	KAITZ, WILLIAM P.	Roxbury
GOODE, P. HAMILTON	Quincy	KAVANAGH, WALTER E.	Brighton
GORDON, LEON	Mattapan	KEARNEY, ROBERT E.	Melrose
GORDON, PHILIP	Lynn	KEEGAN, WILLIAM J.	Dorchester
GORE, BERNARD L.	Everett	KEELER, EVERETT B.	Brighton
GOREN, PHILIP	Dorchester	KEHOE, THOMAS P.	Dorchester
GOTTLIEB, MORRIS J.	Dorchester	KELLAR, JOHN M.	Newtonville
GOUD, EUGENE F.	Dorchester	KELLEGREW, RAYMOND S.	Cambridge
GOULD, HARRY R.	Roxbury	KELLEY, ARTHUR S., JR.	Arlington
GRANLUND, ERNEST A.	Westwood	KELLY, ROBERT R.	Providence, R. I.
GRANVILLE, JOHN O.	Brighton	KENNEY, WILLIAM J., JR.	Brookline
GREENBLATT, ELLIOTT	Dorchester	KEYES, MARGARET M.	Medford
GREENER, WILLIAM E., JR.	Dedham	KILROY, EDWARD T. V.	Dorchester
GREGERMAN, EDWARD B.	Dorchester	KING, ALBERT L.	Brockton
GRODZICKI, EDWARD S.	Newburyport	KING, FREDERICK F.	West Newton
GUZOVSKY, NATHAN I.	Dorchester	KINGSBURY, JAMES R.	Boston
		KINNE, ALICE L.	Boston
HACKENBERGER, RICHARD B.	Belmont	KLOSE, STANLEY F.	Salem
HADLEY, HOWARD E.	Boston	KNOWLES, DOUGLAS	Lynn
HADSELL, BENJAMIN J.	Boston	KOPIECKI, ALBERT D.	Lynn
HADSELL, TOM M.	Boston	KRENSKY, JOEL	Roxbury
HAMILTON, DOUGLAS L.	Beverly	KUBIAK, RICHARD V.	Everett
HAMILTON, JAMES C., JR.	Lexington	KURR, WILLIAM	Boston
HAMMIE, JAMES A.	Roxbury		
HANRAHAN, JOSEPH F.	Cambridge	LALLY, JOHN J.	Brockton
HANSEN, ERLAND F.	North Abington	B.B.A., Boston University	
HAPPEL, PAUL R.	Quincy	LALLY, WILLIAM E.	Newton
HARRINGTON, GERALD C.	Arlington	LAMPARD, DONALD R.	Boston
A.B., Boston College		LAMPREY, KENNETH W.	Winchester
HARRINGTON, SHELBY	Cambridge	LANE, ALDEN L.	Brockton
HARRIS, PETER A.	Watertown	LANE, CARL L.	Boston
HARSFIELD, RAPHAEL E.	Salem	LAPLANTE, ETHEL S.	Boston
HARTIGAN, JOHN P.	Dorchester	LAWRENCE, ARNOLD W.	Roslindale

LAWLESS, JOSEPH F.	Lynn	NALBANDIAN, VIRGINIA M.	Lynn
LeBLANC, RAYMOND J.	Lowell	NEWPOL, EDWARD	Brighton
LEE, TAO T.	Boston	NASH, WARREN R.	Everett
<i>I.L.B., Sun Yat-Sen University</i>		NASON, HELEN G.	Braintree
LEFENFELD, GERALD S.	Dorchester	NICOLosi, CHARLES J.	Gloucester
LEMIEUX, ARTHUR A.	Lynn	NIELSEN, ROBERT N.	East Boston
LENNON, JOHN J.	Brighton	<i>LL.B., Northeastern University</i>	
LENOX, NORMAN	Dorchester	NIMMO, HARRY R.	Methuen
LEVENE, MELVIN H.	Chelsea	NOONAN, ROBERT J.	Melrose
LICHTNER, WILLIAM O., JR.	Waban	NORTON, GEORGE B.	West Roxbury
LINDAHL, DONALD A.	Arlington	NORTON, WILLIAM L.	Arlington
LOWE, JACOB A.	Cambridge	NUCENT, FRANCIS F.	Randolph
LOWE, JOHN E.	Cambridge	NUPOLL, EDWARD L.	Dorchester
LUKE, GREGORY J.	Dorchester	NIGREN, RICHARD A.	Lynn
LYKEN, HERBERT L.	Dorchester		
LYNCH, EDWARD	Roslindale	OATES, JOHN P.	Dorchester
LYNCH, PHILIP J.	Melrose	O'CONNOR, EDWARD P.	Natick
LYTTLER, WILLIAM G.	Sharon	O'CONNOR, JOSEPH J.	Lynn
		O'DRISCOLL, EDWARD T.	East Boston
MACALUSO, CHARLES P.	Medford	O'HARE, THOMAS J.	Dorchester
MACDONALD, DONALD J.	Watertown	ORR, ROBERT J.	Malden
MACE, SHERBURNE F.	Boston	O'SHEA, ROBERT H.	Boston
MACGREGOR, WILLIAM D.	Canton	OSMO, JORMA G.	Maynard
MACKENZIE, ARTHUR E.	Medford	OWENS, THOMAS J.	Medford
MACKINNON, DAVID D.	Cambridge	OXENHAM, EDWARD F.	Roslindale
MACLACHLAN, ARCHIBALD	Roslindale		
MADDEN, VINCENT B.	West Newton	PANGAKIS, JOHN G.	Boston
MAHER, EDWARD C.	Arlington	PARKER, FORREST K.	Lowell
MAHLER, LOUIS H.	Brookline	<i>B.B.A., Northeastern University</i>	
MAKI, VIKO L.	Quincy	PATERSON, WILLIAM	Cambridge
MANN, R. LESLIE	Dorchester	PATTERSON, FREEMAN E.	Watertown
MATEIK, EMANUEL W.	Beverly	PEARCY, CHARLES M.	Boston
MAUGER, FREDERICK V.	Winchester	PEARSON, ARTHUR L.	Newton Upper Falls
MAUS, WILLIAM J.	Mattapan	PEARSON, SIGNE H.	Wellesley
MAYO, HORACE C.	Boston	PECORARO, JOSEPH M.	Everett
MAZZEI, PETER G.	South Boston	PEDEN, JOHN H.	Wollaston
MCCARTHY, RICHARD E.	Jamaica Plain	PEDI, MARIO J.	Chelsea
MCCARTNEY, KENNETH	Winchester	PENTA, JOSEPH C.	East Boston
MCCLURE, ROBERT E.	Boston	PERLES, BEATRICE J.	Dorchester
MCCORMICK, PAUL R.	Cambridge	PERRON, ROBERT J.	Salem
MCDERMOTT, RUSSELL H.	Lowell	PERRY, ROBERT T.	Newton
MCDONNELL, DAVID T.	Boston	PETERSON, JAMES J., JR.	Dedham
MCGRATH, JOHN J.	Woburn	PETRONIO, GEORGE G.	Revere
MCGUIGGAN, THOMAS	Canton	PHILLIPS, DONALD R.	Lynn
MCGUINNESS, THOMAS P.	Allston	PICARIELLO, LOUIS A.	Newton
MCINTYRE, JOHN N.	Lynn	PICKETT, GEORGE T.	Roxbury
McKENNEY, MELVIN W.	Belmont	PIKE, ARTHUR J.	Somerville
<i>A.B., Middlebury College</i>		PLANTA, WESLEY E.	Malden
McMANUS, JOSEPH P.	Dorchester	POLSKY, MELVIN	Boston
McNEILL, ARTHUR E.	Somerville	POPE, OSCAR A.	Lynn
McOSKER, LEIGHTON H.	Peabody	POPP, FREDERICK W.	Melrose
McVINNEY, FRANCIS P.	Hyde Park	POWELL, MICHAEL J.	South Boston
MEAD, JOHN S.	Milton	PRENDERGAST, JAMES F.	Saugus
MEADE, DONALD F.	Brookline	PRESMOTT, ALVAH E.	Lynn
MEAGHER, RICHARD C.	Wellesley	PRESS, NEWTON	Malden
MELANSON, FRANCIS G.	Lynn	PRINCE, NORMAN A.	Lynn
MELOON, CHARLES T.	Keene, N. H.	PROCTOR, FRANKLIN H.	Winthrop
MERRITT, EDWARD D.	Roslindale	PROCTOR, HAROLD I.	Watertown
MEYERS, HARRY J.	Dedham	PROUT, RICHARD J.	Newton
MIGLIORE, MICHAEL A.	Chelsea	PURDY, ALBERT A.	Wollaston
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Offers a broad program of college subjects serving as a foundation for the understanding of modern culture, social relations, and technical achievement. Varied opportunities available for vocational specialization. Degree: Bachelor of Science or Bachelor of Arts.

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In addition to the above schools the University has affiliated with it and conducts: the Lincoln Technical Institute offering, through evening classes, courses of college grade in various fields of engineering leading to the title of Associate in Engineering; and the Lincoln Preparatory School, an accredited evening school preparing for college entrance and offering other standard high school programs.

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*For further information regarding any of the above schools, address*

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School of Law  
47 Mt. Vernon Street

Telephone: KENmore 5800

Other Schools  
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114 Chestnut St.  
Tel.: Spr. 6-3681

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Northeastern University

COLLEGE OF

LIBERAL ARTS

**BULLETIN OF EVENING COURSES**  
ANNOUNCEMENT FOR 1942-1943



BOSTON, MASSACHUSETTS

*For further information or an interview address:*

EBEN O. SMITH, *Director of Evening Courses*  
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College of Liberal Arts  
360 Huntington Avenue  
Boston, Massachusetts

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Saturday	8:45 A.M.— 1:00 P.M.
June 15, 1942 — August 15, 1942	
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Saturday	8:45 A.M.—12:00 M.
August 16, 1942 — June 21, 1943	
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Saturday	
Until Labor Day	8:45 A.M.—12:00 M.
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NORTHEASTERN UNIVERSITY

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COLLEGE OF LIBERAL ARTS

Bulletin of Evening Courses

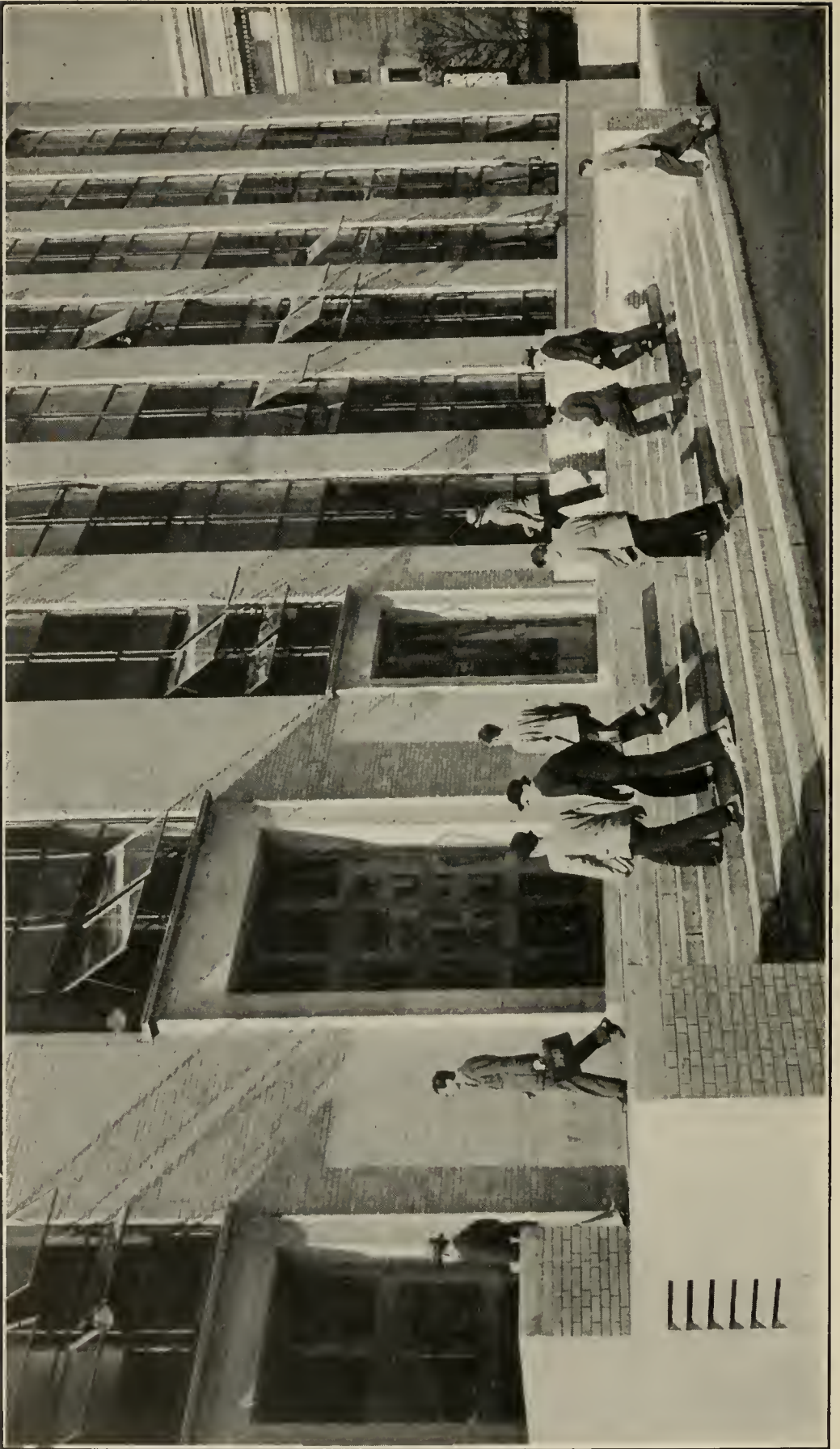
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[ The University is located at the  
entrance to the Huntington Av-  
enue subway within nine minutes  
of Park Street and easily accessi-  
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1942 : 1943

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## COLLEGE OF LIBERAL ARTS

### EVENING COURSES

#### CALENDAR

1942	Sept. 1-4	Make-Up Examinations
	Sept. 9, Wednesday	Classes begin for Seniors
	Sept. 8-26	Registration
	Sept. 21, Monday	Classes begin for Freshmen and Middlers
	Oct. 12, Monday	Columbus Day (Classes suspended)
	Nov. 11, Wednesday	Armistice Day (Classes suspended)
	Dec. 23, Wednesday	Last Class before Christmas Recess
1943	Jan. 4, Monday	First Class after Christmas Recess
	Jan. 18, Monday	Mid-Year Entering Class begins
	Feb. 22, Monday	Washington's Birthday (Classes suspended)
	April 19, Monday	Patriot's Day (Classes suspended)
	April 26-May 8	Second semester Examinations for Freshmen and Middlers
	May 31, Monday	Celebration of Memorial Day (Classes suspended)
	June 21-July 2	Final Examination Period
	July 3-Sept. 6	Summer Recess
		Baccalaureate Service and Commencement Exercises (Dates to be announced)

# Northeastern University

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IRVING EDWIN MOULTROP  
CLARENCE LUCIAN NEWTON  
OLAF OLSEN  
AUGUSTIN HAMILTON PARKER, JR.  
GEORGE EDWIN PIERCE  
ROGER PIERCE  
MATTHEW POROSKY  
FREDERICK SANFORD PRATT  
ROGER PRESTON  
HARRY WENDELL PROUT  
SIDNEY RABINOVITZ  
STUART CRAIG RAND  
JAMES LORIN RICHARDS  
CHARLES MILTON ROGERSON  
ROBERT BILLINGS RUGG  
LEVERETT SALTONSTALL  
RUSSELL MARYLAND SANDERS  
FRANK PALMER SPEARE  
RUSSELL HENRY STAFFORD  
FRANCIS ROBERT CARNEGIE STEELE  
CHARLES STETSON  
EARL PLACE STEVENSON  
ROBERT TREAT PAINE STORER  
FRANK HORACE STUART  
EDWARD WATSON SUPPLE  
ELIOT WADSWORTH  
EUSTIS WALCOTT  
EDWIN SIBLEY WEBSTER

SINCLAIR WEEKS

# Northeastern University

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## GENERAL UNIVERSITY COMMITTEES

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### EXECUTIVE COUNCIL

CARL STEPHENS ELL, *Chairman*

EVERETT AVERY CHURCHILL

GALEN DAVID LIGHT

### UNIVERSITY CABINET

CARL STEPHENS ELL, *Chairman*

EVERETT AVERY CHURCHILL

EDWARD SNOW PARSONS

WILLIAM THOMAS CLONEY, JR.

JOHN BUTLER PUGSLEY

CHARLES WILLIAM HAVICE

CHARLES HENRY SAMPSON

ASA SMALLIDGE KNOWLES

MILTON JOHN SCHLAGENHAUF

WILFRED STANLEY LAKE

SYDNEY KENNETH SKOLFIELD

JAMES WALLACE LEES

EBEN OSWELL SMITH

GALEN DAVID LIGHT

J. KENNETH STEVENSON

HAROLD WESLEY MELVIN

WILLIAM CROMBIE WHITE

WINTHROP ELIOT NIGHTINGALE

RUSSELL WHITNEY

FRANK GIVEN AVERILL, *Secretary*

### ADMINISTRATIVE COMMITTEE

EVERETT AVERY CHURCHILL, *Chairman*

FRANK GIVEN AVERILL

WILLIAM CROMBIE WHITE

GALEN DAVID LIGHT

RUSSELL WHITNEY

### LIBRARY COMMITTEE

EVERETT AVERY CHURCHILL, *Chairman*

ASA SMALLIDGE KNOWLES

MYRA EDNA WHITE

WILFRED STANLEY LAKE

WILLIAM CROMBIE WHITE

RUSSELL WHITNEY



# *Northeastern University and Affiliated Schools*

## STATISTICAL SUMMARY

1940—1941

	<i>Administrative and Instructional Staff</i>	<i>Enrollment</i>
General Administration	9	
Northeastern University		
College of Liberal Arts		
Day	74	503
Evening	11	118
College of Engineering	99	1500
College of Business Administration	58	664
School of Business	111*	1599*
School of Law	41*	947*
Affiliated Schools		
Lincoln Technical Institute	42	715
Lincoln Preparatory School	30	428
Huntington Day School for Boys	16	146
Huntington Summer School	10	138
Miscellaneous Courses		
Civilian Pilot Training Program	4	94
Engineering Defense Training Program	39	742
	<hr/>	<hr/>
Total	544	7594
Less Duplicates	199	522
	<hr/>	<hr/>
	345	7072

\* These figures include the administrative officers, faculties, and students of the Divisions of the University in Worcester, Springfield, and Providence.

## *General Statement*

NORTHEASTERN University is incorporated as a philanthropic institution under the General Laws of Massachusetts. The State Legislature, by special enactment, has given the University general degree granting powers.

The Corporation of Northeastern University consists of men who occupy responsible positions in business and the professions. This Corporation elects from its membership a Board of Trustees in whom the control of the institution is vested. The Board of Trustees has four standing committees: (a) an Executive Committee which serves as an Ad Interim committee between the regular meetings of the Board of Trustees and has general supervision of the financial and educational policies of the University; (b) a Committee on Housing which has general supervision over the buildings and equipment of the University; (c) a Committee on Funds and Investments which has the responsibility of administering the funds of the University; (d) a Development Committee which is concerned with furthering the development plans of the University.

Founded in 1898, Northeastern University, from the outset, had as its dominant purpose the discovery of human and social needs and the meeting of these needs in distinctive and highly serviceable ways. While subscribing to the most progressive educational thought and practice, the University has not duplicated the programs of other institutions but has sought "to bring education more directly into the service of human needs."

*With respect to program, Northeastern has limited itself:*

- To offering, in its several schools, basic curricula from which non-essentials have been eliminated;
- To effective teaching;
- To advising and guiding students;
- To giving students the chance to build well-rounded personalities through a balanced program of extra-curricular activities.

The Northeastern Plan of Education is especially designed for the student who must earn while he learns. In the main, it consists of two definite types of education.

- Co-operative Education by Day,
- Adult Education by Night.

The plan has been developed in such a way that experience in jobs with pay is utilized to help boys of limited financial resources secure an education and at the same time gain the maximum educational benefit from their practical experience. So far as the New England States are concerned, Northeastern University is the only institution whose day colleges, other than the School of Law, are conducted under the Co-operative Plan.

The several schools and programs of the University are operated either under the name "Northeastern University" or by its affiliated schools — the Lincoln Schools and The Huntington Day School for Boys. The following is a brief outline of the principal types of educational opportunities offered.

1. In the field of Co-operative Education there are three day colleges — the College of Liberal Arts, the College of Engineering, and the College of Business Administration. All of these colleges offer five-year curricula. The College of Liberal Arts offers majors in the usual fields of the arts and the sciences leading to the degrees of Bachelor of Arts and Bachelor of Science. The College of Engineering, one of the largest engineering colleges in the United States, has curricula in Civil, Mechanical (with Aeronautical option), Electrical, Chemical, and Industrial Engineering. The College of Business Administration has curricula in Accounting, Marketing and Advertising, and Industrial Administration. The College of Engineering and the College of Business Administration confer the degree of Bachelor of Science with specification indicating the field of specialization. The Co-operative Plan under which all of these day colleges operate enables the student to alternate regular periods of classroom instruction with supervised employment in an industrial or commercial position, thus combining theory and practice in an exceedingly effective manner. Apart from the educational advantages of the Co-operative Plan is the opportunity for self-support while the student is pursuing his studies at Northeastern University. During the co-operative periods, students not only gain experience but are also paid for their services. Approximately three hundred business and industrial concerns co-operate with Northeastern University in making this program effective.
2. The School of Law conducts both a day and an evening undergraduate program which prepares for admission to the bar and for the practice of the law and leads to the degree of Bachelor of Laws.
3. The Adult Education Program has been developed in the evening work of the School of Law as indicated above, in the School of Business, and in the evening courses of the College of Liberal Arts. The School of Business has curricula in Management (with Industrial and Merchandising majors), Accounting, Law and Business Management, and Engineering and Business. This School awards the Bachelor of Business Administration degree with specification and the Bachelor of Commercial Science degree in Law and Business Management. A division of the School of Business is also conducted in Springfield with curricula in Accounting, Management, and Engineering and Business, leading to the Bachelor of Business Administration degree. The College of Liberal Arts offers certain of its courses during evening hours constituting a program, three years in length, equivalent in hours to one-half the requirements for the A.B. or S.B. degree and providing a general education and prep-

aration for admission to the School of Law. The title of Associate in Arts is conferred upon those who complete this program.

4. The Adult Education Program has also been developed through the Lincoln Schools, which are affiliated with and conducted by Northeastern University. The classes in these schools are held at convenient evening hours. The Lincoln Technical Institute offers curricula upon a college level in various phases of engineering leading to the title of Associate in Engineering; whereas the Lincoln Preparatory School, accredited by the New England College Entrance Certificate Board, prepares students for admission to college and offers other standard high school programs.
5. The Huntington Day School for Boys, also affiliated with and conducted by Northeastern University, is the outgrowth of a demand in the city of Boston for an urban preparatory school with high educational standards which would furnish thorough preparation for admission to the leading colleges and universities. While easily accessible to the various sections of Boston and to the suburbs, it has the facilities of a country day school and offers a country day school program. This School is one of the leading preparatory schools of the country.

### GIFTS AND BEQUESTS

Northeastern University will welcome gifts and bequests for the following purposes:

- (a) For its building program.
- (b) For general endowment.
- (c) For specific purposes which may especially appeal to the donor.

It is suggested that, when possible, those contemplating gifts or bequests confer with the President of the University regarding the University's needs before legal papers are drawn.

Gifts and bequests should be made only in the University's legal name, which is "Northeastern University."





*Richards Hall*

## *Location of University Buildings*

Northeastern University is located in Boston, a city which is rich in educational and cultural opportunities. The University center is on Huntington Avenue just beyond Massachusetts Avenue and opposite the Boston Opera House. Here on an eight acre campus are located the educational buildings of the University except that of the School of Law.

### **Richards Hall**

Richards Hall at 360 Huntington Avenue contains over one hundred thousand square feet of floor space devoted to administrative and instructional purposes. On the first floor are the general administrative offices of the University. The University bookstore, the "Husky Hut" and the student checkroom are located in the basement. There are three large lecture halls and numerous classrooms and laboratories. The office of the Director of the evening courses of the College of Liberal Arts is located on the first floor of this building.

### **New Building**

This building, completed and occupied in November, 1941, contains forty-two thousand square feet of floor space. Here are located the Chemical Engineering and Biological laboratories, a large commons room open to day and evening students, and eighteen classrooms and a lecture hall.

### **East Building**

This building contains the general University library, classrooms, and certain laboratories.

### **South Building**

The South Building of the University contains certain laboratories, a large lecture hall, and several classrooms.

### **Beacon Hill Building**

The Beacon Hill Building, located at 47 Mt. Vernon Street, within a few minutes walk of the State House, and occupied exclusively by the Law School, contains administrative offices, a library, classrooms, student lounges, and other facilities.

## *Transportation*

The University center is easily reached from the various railroad stations and from all points on the Boston Elevated System. The new Huntington Avenue Subway comes to the surface at the University center. Ample parking space is available for the use of students coming by automobile.



*A quiet corner in the new Library*

# College of Liberal Arts

## EVENING COURSES

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### OFFICERS OF ADMINISTRATION

CARL STEPHENS ELL, A.B., M.S., Ed.M., Sc.D.  
*President of the University*

FRANK PALMER SPEARE, M.H., LL.D.  
*President Emeritus*

EVERETT AVERY CHURCHILL, A.B., Ed.D.  
*Vice-President of the University*

GALEN DAVID LIGHT, A.B.  
*Secretary-Treasurer of the University*

WILFRED STANLEY LAKE, A.B., M.A., Ph.D.  
*Dean*

EBEN OSWELL SMITH, S.B.  
*Director of the Evening Courses*

J. KENNETH STEVENSON, B.C.S.  
*Assistant to the Vice-President*

MILTON JOHN SCHLAGENHAUF, A.B., B.D., M.A.  
*Director of Admissions*

FRANK GIVEN AVERILL, A.B.  
*Director of the Development Program*

### CHAIRMEN OF INSTRUCTIONAL DEPARTMENTS

CHARLES FREDERICK BARNASON, A.B., A.M., Ph.D.  
Professor of Modern Languages  
Res. 122 Downer Ave., Hingham

STANLEY GODDARD ESTES, A.B., M.A., Ph.D.  
Professor of Psychology  
Res. 60 Pinckney St., Boston

ROGER STANTON HAMILTON, A.B., M.A., Ph.D.  
Professor of Economics  
Res. 1367 Walnut St., Newton Highlands

CHARLES WILLIAM HAVICE, A.B., M.A., S.T.B., Ph.D.  
Professor of Sociology  
Res. 83 Franklin St., South Braintree

FREDERICK WILLIAM HOLMES  
Professor of English  
Res. 43 Lincoln Street, Dedham

STANLEY DEMETRIUS MIROYIANNIS, S.B., M.A., Ph.D.  
 Professor of Biology  
 Res. 8 Cumberland St., Boston

CARL FREDERICK MUCKENHOUP, A.B., S.B., Ph.D.  
 Professor of Physics  
 Res. 332 Winchester St., Newton Highlands.

JOSEPH SPEAR, A.B., M.A.  
 Professor of Mathematics  
 Res. 31 Matchett St., Brighton

ARTHUR ANDREW VERNON, S.B., M.S., Ph.D.  
 Professor of Chemistry  
 Res. 14 Standish St., Newton Highlands

### INSTRUCTORS

#### Economics

NORMAN GREENE, B.Sc. in Ed.  
 JOHN G. PINKHAM, A.B.  
 EBEN OSWELL SMITH, S.B.

#### English

HAROLD ADLINGTON, A.B., M.A.  
 J. KEENE HORNER, B.A., M.B.A.  
 HARRY KEMELMAN, A.B., M.A.  
 J. BENJAMIN TOWNSEND, A.B., M.A.

#### History and Government

CLEVELAND C. CRAM, JR., B.A.  
 ROBERT K. DAVIS, A.B., A.M.

#### Mathematics

SAMUEL ARTHUR STONE, S.B., M.S.

#### Psychology

DONALD FREEMAN BROWN, A.B., A.M.

#### Sociology

THOMAS AUSTIN BRIDGES, B.S., A.M., S.T.B.  
 RALPH A. STRAETZ, A.B., Ed.M.

#### Survey of Physical Sciences

DUNCAN MACDONALD, S.B., M.A.

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MYRA EDNA WHITE  
*Librarian*

MARY B. FOOR  
*Manager of the Bookstore*

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MURIEL FAITH WHITE  
*Secretary to the Director*



## CLASS SCHEDULE

1942 — 1943

The school year consists of two fifteen week semesters followed by a seven week term, exclusive of examination periods.

## Freshman Class

*Opening Class September 21, 1942*

		<i>Semester Hours</i>
E 1-A, 2-A	English I (1, 2)	6
H 1-2	History of Civilization (1, 2, 3)	8
P 1-A, 2-A	Survey of the Physical Sciences (1, 2, 3)	8
	or	
M 1	College Algebra (1)	3
M 3	Trigonometry (2)	2
P 1	Physics I (2, 3)	3

## Middler Class

*Opening Class September 21, 1942*

Ec 3-4	Principles of Economics (1, 2)	4
S 1	Introduction to Sociology (1)	2
S 2	Principles of Sociology (1, 2)	2
S 14	Urban Sociology (2)	2
E 34	Modern Literature Since 1915 (3)	2
E 15-16	Survey of English Literature (1, 2)	6
Gv 3-4	Comparative Government (2, 3)	4

## Senior Class

*Opening Class September 9, 1942*

Ps 1	Introduction to Differential Psychology (1)	2
Ps 2	General Psychology (1, 2)	2
Ps 9	Psychology of Personality (2)	2
Ps 11	Applied Psychology (3)	2
H 13	English Constitutional History (1)	3
H 14	American Constitutional History (2)	3
Gv 3-4	Comparative Government (2, 3)	4
Ec 12	Economic Systems (1, 2)	2
S 7	Principles of Social Ethics (1, 2)	2

## Midyear Freshman

*Opening Class January 18, 1943*

E 1-A, 2-A	English I (2, 3)	6
H 10	United States since 1865 (2, 3)	2
H 11-12	Latin American History (2, 3)	4

Figures in the parentheses following course name indicate semester during which course is given.

The University reserves the right to withdraw any course in which there are less than eight enrollments.



## GENERAL PROGRAMS

The freshman program is the same for all students.<sup>1</sup> During the middler and senior years, students may elect to concentrate in the fields of English, History and Government, and Social Science.

The courses forming the Pre-legal Program are listed on the next page. Figures preceding course name indicate course number.

Figures after course name indicate semester hours.  
The University reserves the right to withdraw the concentration offering of the middler or senior years in any field in which the number of students enrolled is less than eight.

Year SEQUENCE	COURSES REQUIRED OF ALL STUDENTS	ADDITIONAL REQUIRED COURSES FOR CONCENTRATION IN ENGLISH	ADDITIONAL REQUIRED COURSES FOR CONCENTRATION IN HISTORY AND GOVERNMENT	ADDITIONAL REQUIRED COURSES FOR CONCENTRATION IN SOCIAL SCIENCE
I	E 1-A, 2-A English I 6 H 1-2 History of Civilization 8 P 1-A, 2-A Survey of the Physical Sciences 8 or M 1 College Algebra 3 M 3 Trigonometry 2 P 1 Physics I 3			
II	E 15-16 Survey of English Literature 6 Ec 3-4 Principles of Economics 4 S 1 Introduction to Sociology 2 S 2 Principles of Sociology 2 P 2 **Physics I 3 P 3 **Physics II 2	E 5-6 Advanced Composition or E 25-26 American Literature *Elective 4	4 3-4 Comparative Government *Elective 4	S 3 Social Problems 2 S 4 Social Pathology 2 *Elective 4
III	E 13-14 Effective Speaking 2 Gv 1-2 American Government and Politics 6 Ps 1 Introduction to Differ- ential Psychology 2 Ps 2 General Psychology 2 S 7 Principles of Social Ethics 2	E 5-6 Advanced Composition or E 25-26 American Literature *Elective 4	4 13-14 English and American Constitutional History 6 *Elective 4	Ps 9 Psychology of Personality 2 Ps 10 Abnormal Psychology 2 Ps 11 Applied Psychology 2 *Elective 4
Total	50	18	18	18
*Elective — Elective courses may be chosen from any field. **To be taken by students who have completed P 1. <sup>1</sup> Freshmen may choose to elect College Algebra, Trigonometry, and Physics I in lieu of Survey of the Physical Sciences.				

### SPECIAL PRE-LEGAL PROGRAM

Students planning to enter the School of Law are expected to complete a total of sixty-eight semester hours of class work.

The schedule of courses making up this program is listed below:

First Year		<i>S.H.</i>	<i>S.H.</i>
E 1-A, 2-A	English I (1, 2)	6	
H 1-2	History of Civilization (1, 2, 3)	8	
P 1-A, 2-A	Survey of the Physical Sciences (1, 2, 3)	8	22
		<hr/>	
Second Year			
E 15-16	Survey of English Literature	6	
Ec 3-4	Principles of Economics	4	
Gv 3-4	Comparative Government	4	
S 1	Introduction to Sociology	2	
S 2	Principles of Sociology	2	
	Elective	4	22
		<hr/>	
Third Year			
E 13-14	Effective Speaking	2	
Gv 1-2	American Government and Politics	6	
H 13-14	English and American Constitutional History	6	
Ps 1	Introduction to Differential Psychology	2	
Ps 2	General Psychology	2	
S 7	Principles of Social Ethics	2	
	Elective	4	24
		<hr/>	
Total			68



## THE COLLEGE OF LIBERAL ARTS

### Evening Courses

#### STATEMENT OF PURPOSE

The College of Liberal Arts through its evening courses offers several programs in general education and a pre-legal program preparing for admission to Northeastern University School of Law.

By conducting its classes at convenient evening hours, it gives high school graduates who are obliged to seek work immediately upon graduation an opportunity to continue their education. In general those who seek admission to the evening classes of the College of Liberal Arts are divided into two groups.

The first group is composed of those who wish to continue their education along cultural lines. The programs available afford to this group a general education, together with specialization in one of three fields: English, History and Government and Social Science.

The second group is composed of those who wish to prepare for admission to the School of Law. Under the rules of the Supreme Judicial Court in relation to the admission of attorneys in Massachusetts, an applicant is required to complete one-half of the work acceptable for a bachelor's degree in an approved college or university before he begins the study of law. The evening pre-legal program of the College of Liberal Arts is especially designed for those who wish to prepare for admission to either the day or evening division of the Northeastern University School of Law.

Increasingly the value of a broad cultural education is being realized. This is recognized in the pre-legal study required before admission to law school in nearly all states. It is also recognized in newly required courses of a cultural nature for accounting and engineering training. This cultural education is obtainable either before or after the completion of one's specific vocational training. Not only is a cultural education valuable in and of itself, but from a strictly vocational point of view it is highly important. The evening courses of the College of Liberal Arts are particularly valuable as many of them deal with basic principles which underlie business in general.

Finally, the courses offered will broaden the field of a student's interest. Through this broadening, an appreciation of many fields of knowledge will be obtained which will greatly enrich the student's personal living.

## REQUIREMENTS FOR THE TITLE OF ASSOCIATE IN ARTS

Each evening course meets the same academic standards and carries the same semester hour credit as the corresponding course in the day program of the College of Liberal Arts. The courses, however, have been carefully selected to meet the needs of evening students.

The following requirements must be fulfilled by candidates for the title of Associate in Arts:

1. To be eligible for the title of Associate in Arts, a student must complete a total of not less than sixty-eight semester hours of academic work with a degree of proficiency acceptable to the faculty.
2. Furthermore, a candidate for the title of Associate in Arts taking one of the general programs must meet the minimum field requirements listed below:

	Semester Hours Required
Economics	4
English	14
Government	6
History	8
Psychology or Sociology	4
Science	8
Electives	24
	—
Total	68

3. A candidate for the title of Associate in Arts who is preparing for admission to Northeastern University School of Law must complete all the required courses listed in the pre-legal program totaling sixty semester hours and in addition eight semester hours chosen from any field.

The above requirements may be met by class attendance three nights a week, forty weeks each year for the three years except that in the first semester of the third year it will be necessary to attend class four nights a week. In some cases it may be advisable for the best interest of the student to take more than three years to complete this program.

## REQUIREMENTS FOR A.B. OR S.B. DEGREE

Any man who completes the requirements for the Associate in Arts title may become a candidate for a bachelor's degree in the College of Liberal Arts by completing an additional sixty-seven semester hours of work and by meeting major, minor and language requirements in the Day College.

The Day College is open to men only.

## ADMISSION REQUIREMENTS

Admission requirements are the same for the Day and Evening work in the College of Liberal Arts. However, both men and women are admitted to the evening courses while the Day College of Liberal Arts is restricted to men only.

Applicants for admission must qualify by one of the following methods:

1. Graduation from an approved course of study in an accredited secondary school.
2. Completion of fifteen secondary school units with a degree of proficiency satisfactory to the Department of Admissions.
3. Examinations—certificate of entrance examinations passed for admission to recognized colleges and technical schools may be accepted.

Regardless of the method used applicants for admission must present prescribed subjects in either Group A or Group B.

Group A		Group B	
English	3	English	3
*Foreign Language (Ancient or Modern)	3 or 4	Mathematics	2 or 3
Social Sciences	2	Natural Sciences	1
**Electives	6 or 7	**Electives	8 or 9
	<hr/>		<hr/>
Total	15	Total	15

\*One year of a foreign language is not accepted. Therefore, this requirement may consist either of three years of one language or two years of each of two languages.

\*\*Not less than four of the "electives" must be in one or more of the following academic branches: Languages, Natural Sciences, Mathematics, Social Sciences, History.

## GENERAL INFORMATION

## Advanced Standing

Students transferring from approved colleges will be admitted to advanced standing provided their records warrant it. Whenever a student enters with advanced standing and later proves to have inadequate preparation in any of his prerequisite subjects, the faculty reserves the right to require the student to make up such deficiencies.

## Application for Admission

The college year begins in September. Students are also admitted at the beginning of the second and third semesters to courses for which they have the required background.

A limited program of courses will be offered for entering students in January. Students who enter in January will not be able to save any time but will be able to take a reduced schedule in subsequent years.

Each applicant for admission is required to file an application blank setting forth his previous education and the name of one person to whom reference may be made concerning his character and previous training.

Inside the back cover of this catalogue is an application blank. It should be filled out in ink and forwarded to the Director of the Evening Courses of the College of Liberal Arts, Northeastern University, 360 Huntington Avenue, Boston, Massachusetts. Upon receipt of the application, the Director obtains the previous school records, the statement from the reference, and after considering these, informs the applicant as to his eligibility for admission.

Applications should be filed preferably before the registration period, thus allowing time to determine eligibility for admission and to adjust any schedule problems before the opening night. Applicants are urged to visit the school for a personal interview if it is possible for them to do so.

Applicants seeking advanced standing should arrange to have transcripts of their previous college records forwarded with their application.

### Registration

The filing of the application for admission does not constitute registration. All students are required to register at the college and arrange for the payment of their tuition during the registration period. (See calendar p. 4.)

### Attendance and Examinations

Attendance is required of all students at recitations and lectures continuously throughout the academic year.

Regular final examinations are held at the close of each course.

No student will be permitted to take a final examination in a course who has been present at less than seventy per cent of the lectures. To be entitled to attendance credit a student must be present at least one hour in a one and one-half hour lecture.

Make-up examinations are scheduled in March and September of each year. (See calendar, p. 4.) Unsatisfactory and incomplete grades must be removed not later than the next school year following that in which they were received.

### Grades

The work of each student shall be graded upon examinations according to the following scale:

- |                                  |                |
|----------------------------------|----------------|
| A Superior                       | } Honor Grades |
| B Above average                  |                |
| C Average                        |                |
| D Lowest passing grade           |                |
| E Unsatisfactory*                |                |
| F Failure**                      |                |
| I Incomplete — no examination*** |                |

\* An unsatisfactory grade may be made up by taking the make-up examination and obtaining a satisfactory grade.

\*\* A failure may be made up only by repeating the course in its entirety and obtaining a satisfactory grade.

\*\*\* An incomplete grade may be made up by taking the next make-up or regular examination.



### Honor List

The Honor List, issued at the end of each semester, contains the names of all students taking a full program who have an honor grade average in all subjects with no grade below "C" in any subject.

### Scholarships

Partial tuition scholarships are awarded annually to the two highest ranking students of the freshman and middler classes. These awards are made during the summer and are based on the record made during the previous school year.

Freshman Class — One \$80.00 scholarship is awarded to the highest ranking student.

One \$40.00 scholarship is awarded to the second highest ranking student.

Middler Class — Similar awards are made to the two highest ranking students.

In order to be eligible for these awards, students must fulfill the following conditions:

1. They must be carrying a full program — not less than twenty semester hours.
2. They must register for a full program in the fall succeeding the award.

### Student Activities

While the major part of the time of evening students must of necessity be taken up with their studies, it is possible for interested students to engage in activities. The administrative officers of the school believe that the association of students in such activities is of distinct value.

## TUITION AND FEES

### Application Fee

An application fee of \$5.00 is required when the application for admission is filed. This fee is not refundable.

### Tuition

A full-year program is considered to be twenty to twenty-two semester hours and all students carrying such a program are charged \$160 which is payable in four installments. The first installment is \$35 and is due as follows: Freshmen and Middlers, Monday, September 21; Seniors, Monday, September 14. The remaining installments are due as follows: \$45, November 30; \$40, February 15; \$40, May 3.

### University Fee

All students enrolled in any school of the University are charged a University Fee which is based on the number of semester hours for which

the student is enrolled. The charge is fifty cents per semester hour of class work, not to exceed \$10 in any one year. This fee covers in part library costs, general material costs, general university service charges and similar items for which separate fees are frequently charged by other colleges and universities. For students enrolled for programs extending over the full year this fee is payable one-half with the September tuition payment and one-half with the February tuition payment. In the case of students enrolled for single courses the fee is payable at the beginning of the course.

#### **Late Payment Fee**

Students who do not pay their quarterly tuition bills during the week when they are due must pay a late payment fee of \$1.25. This is a fixed fee and does not vary with the amount of the tuition bill.

#### **Examination Fees**

A fee of \$2.00 is charged for each make-up examination taken by a student.

#### **Graduation Fee**

A graduation fee of \$5.00 is charged each student during the senior year. This fee is payable with the fourth installment of tuition on May 3.

#### **Payments**

Checks or money orders should be drawn payable to Northeastern University.

#### **Withdrawals and Refunds**

In the event a student is obliged to withdraw from the school for causes deemed adequate by the Committee on Administration, the unused tuition will be refunded.

## DESCRIPTION OF COURSES

\* Starred courses are not regularly offered every year.

They will be offered when elected by a minimum of ten students.

The University reserves the right to withdraw any course in which there are less than eight enrollments.

### ECONOMICS

#### Ec 3 Economic Principles

A thorough grounding in the fundamental principles and laws of economics is the aim of this basic course. The main topics include the nature and organization of production, the nature and importance of wants, the relation of money and prices, the process of exchange, and the nature of international trade.

2 semester hour credits

#### Ec 4 Economic Principles

A continuation of Ec 3. A careful analysis is made of the determination of price under conditions of competition and monopoly, and of the distribution of wealth and income in the form of wages, economic rent, interest, and profits. The elements of insurance are discussed in connection with profits.

Preparation: Ec 3

2 semester hour credits

#### Ec 7 Money and Banking\*

This course, amplifying the more general treatment of money and credit in Ec 3 and Ec 4, considers the problems of monetary and banking control with particular emphasis upon the policies of the Federal Reserve System. Current developments are carefully considered.

Preparation: Ec 3, Ec 4

2 semester hour credits

#### Ec 11 Labor Problems\*

An intensive study of the labor problems of modern industry constitutes the content of this course. Unemployment and other grievances of the worker, including industrial accident and disease, inadequate wages, long hours, undesirable working conditions, child and woman labor, etc., are carefully analyzed. Labor unions, representing the workers' effort to solve the above problems, receive extended attention with an appraisal of their policies and accomplishments. Employee representation, profit-sharing plans and similar devices of the employer to meet the same problems are also examined critically. The attitude of our government toward these problems and its attempts to handle them are analyzed carefully. The suggestions of other groups and agencies in respect to these problems will be treated, e.g. co-operative movement, socialism.

Preparation: Ec 3, Ec 4

3 semester hour credits

#### Ec 12 Economic Systems

After developing various criteria for evaluating the different economic systems, the course proceeds to a comparative analysis of capitalism, co-operation, socialism, communism, and fascism. The problems of economic planning receive particular attention.

Preparation: Ec 3, Ec 4

2 semester hour credits

### ENGLISH

#### E 1-A English I

The aim of this course is to help the student attain competence in the understanding and evaluating of modern literature and in written expression. It includes a review of the structural essentials of the English language, various written assignments, and the study of essays and informational articles.

3 semester hour credits

#### E 2-A English I

Continuing the general purposes of E 1-A, this course proceeds to a study of the special problems of description and narration, and to a critical reading of poems, short stories, and plays.

3 semester hour credits

**E 5 Advanced Composition\***

The technique of writing in the shorter literary form will be studied in detail and applied systematically toward the building up of the student's individual style. A part of the time each week will be devoted to personal conference between the student and the instructor.

Preparation: E 1-A, E 2-A

2 semester hour credits

**E 6 Advanced Composition\***

The continuation of the technique of writing and the building up of an individual style for the student.

Preparation: E 5

2 semester hour credits

**E 13 Effective Speaking\***

This course offers practical training in the preparation and presentation of the various types of speeches. The instruction is planned to eliminate defects of voice, posture, and delivery, and to develop in the student an ability to speak easily, naturally, and forcefully.

1 semester hour credit

**E 14 Effective Speaking\***

Continued practice in impromptu and extempore speaking, organization of material, consideration of the audience, and vocabulary building, form the basis of the course.

Preparation: E 13

1 semester hour credit

**E 15 Survey of English Literature**

A survey of English literature to 1800. After a brief study of the social and political background of each literary period, the writing of the period is considered, and the more important writers are studied and read in detail. The purpose of the course is to give the student an appreciation of English literature as a whole, and an intimate knowledge of its major figures.

3 semester hour credits

**E 16 Survey of English Literature**

A survey of English literature from 1800 to the present century. The outstanding writers are read, studied, and related to the general background of nineteenth-century England. The purpose of the course is to give the student an understanding of the writers who contributed most to the formation and development of modern literature in England.

3 semester hour credits

**E 25 American Literature to 1860\***

A survey of American literature from colonial times to the triumph of the transcendental movement in New England. The work of Bryant, Irving, Cooper, Poe, Emerson, Thoreau, Lowell, Holmes, Longfellow, and Melville will be emphasized.

2 semester hour credits

**E 26 American Literature After 1860\***

Continuing E 25, the course will consider the rise of realism after the Civil War, the development of American humor, the appearance of local color writers, and modern trends since 1900.

2 semester hour credits

**E 33 Modern Literature 1895-1915\***

Beginning with a study of late nineteenth-century literature in England and America, the course considers the principal literary developments of the period 1895 to 1915. New forms and methods in poetry, the novel, the short story, and the play are studied, and are illustrated by the work of literary groups and movements and by such major writers as Walt Whitman and Henry James.

2 semester hour credits



**E 34 Modern Literature Since 1915**

A survey of contemporary literature in England and America. Outstanding writers are studied in detail. Some of the subjects discussed are recent changes in form and technique; literary experiments; the effect on literature of the World War, and of recent social changes. During the course each student writes a paper and presents a class report on a contemporary author.

2 semester hour credits

**GOVERNMENT****Gv 1 American Government and Politics\***

The study of our National Government with respect to its organization and function; its powers and limitations under the Constitution; its legislative, administrative, and judicial machinery under the party system of government and bureaucracy.

3 semester hour credits

**Gv 2 American Government and Politics\***

A more detailed study of the relationships of our federal, state, and municipal governments, including an analysis and comparison of the various state governments and types of municipal government with respect to state and local agencies for carrying out the executive, legislative, and judicial functions of government in a democratic country.

3 semester hour credits

**Gv 3 Comparative Government**

The older governments of Europe, those principally of Great Britain and France, but also of Switzerland and the Scandinavian countries, are described and analyzed in this course. Institutions are compared in these various states with reference to America and the newer governments of Europe.

2 semester hour credits

**Gv 4 Comparative Government**

A study of the newer governments of Europe, as found in Germany, Italy, and the Soviet Union. Democracy and dictatorship are analyzed as different modes of life and rule. These states are compared to each other, to the older governments of Europe, and to the United States.

2 semester hour credits

**Gv 7 Origins of Political Theory\***

A survey of political philosophy from Plato and Aristotle to Bentham. The nature, origin, forms, and ends of the state and government are covered.

2 semester hour credits

**Gv 8 Modern Political Theory\***

A critical study is made of the major developments in political theory since Bentham, with special reference to the influence of these developments upon American politics and political institutions. Attention is paid to the modern conflict between the democratic and the totalitarian conceptions of the state.

2 semester hour credits

**HISTORY****H 1 History of Civilization**

This is primarily a background course. Introductory lectures deal with primitive society, the development of language and writing, and the early contributions of Egypt and Asia. More detail is given to the structure of Greek and Roman society, the rise of the Christian Church, the barbarian invasions of the Empire, the growth of Islam, and the life of the early Middle Ages.

4 semester hour credits

## **H 2 History of Civilization**

This course deals with the growth of the monarchies in Europe, the medieval Church, the art and literature of the Renaissance and Reformation, the economic revolution, the Age of Reason in France and England, the Old Regime and the Revolution in France, and the growth of science and industrialism.

As in H 1, the emphasis is upon the cultural rather than the political history of Europe.  
4 semester hour credits

## **H 9 The United States to 1865\***

This course is an interpretation of the events which shaped the American nation to the Civil War. Social customs, economic influences, racial contributions, and humanitarian movements are not neglected, though the political history is stressed.

2 semester hour credits

## **H 10 The United States Since 1865**

Major attention is given to the social, economic, and political foundations of recent history in this survey of the transition of America from an agricultural to an urban industrialized society since the Civil War. Consideration is given to the problems arising with the emergence of America as a world power.

2 semester hour credits

## **H 11 Latin American History**

This course deals with the European background of Spanish and Portuguese colonization in the New World, the exploits of the conquistadores, the Indian civilizations, colonial institutions, and the forces which gave rise to the revolutions in the early 19th century.

2 semester hour credits

## **H 12 Latin American History**

This course continues H 11, and describes the Wars of Independence and the rise of the republics. A study is made of the international relations of the Latin American countries, the Monroe Doctrine, and the Pan-American conferences.

2 semester hour credits

## **H 13 English Constitutional History**

This course is devoted to a consideration of the English constitution and of the common law; local government vs. central government; the origin and growth of Parliament; the development of the British cabinet system; and a comprehensive study of statutes and documents.

3 semester hour credits

## **H 14 American Constitutional History**

In this course a study is made of the historical development of the United States Constitution with particular emphasis on its progressive adaptation to a changing social and economic order.

3 semester hour credits

## **MATHEMATICS**

### **M 1 College Algebra**

The study of algebra is scheduled to begin with the solution of the quadratic equation, simultaneous quadratics, and equations in quadratic form. However, a rapid but thorough review of the fundamentals of algebra precedes this. The solution of the quadratic is followed by a detailed study of the theory of exponents. Then follow radicals, series, variation, inequalities, and the elementary principles of the theory of equations. Considerable time is given to plotting and the use of graphs in the solution of equations. The elementary theory of complex numbers is also covered.

3 semester hour credits

### **M 3 Trigonometry**

This is a complete course in trigonometry and should enable the student to use all branches of elementary trigonometry in the solution of triangles as well as in the more advanced courses where the knowledge of trigonometry is essential. Some of the topics covered are the trigonometric ratios; inverse functions; goniometry; logarithms; circular measure; laws of sines, cosines, tangents, half angles; solution of oblique and right triangles; transformation and solution of trigonometric and logarithmic equations. Considerable practice in calculation of practical problems enables the student to apply his trigonometry to problems arising in practice at an early stage. Additional work, graphical and algebraic, is done with the complex number, introducing De-Moivre's theorem and the exponential form of the complex number.

2 semester hour credits (2 cl.)

## **PHYSICS**

### **P 1-A Survey of the Physical Sciences**

The purpose of the course is to give a definite conception of the physical world to those students who ordinarily would not elect a science course but who need to know something about the contributions and the place of the physical sciences in contemporary civilization. This course begins with a study of the universe and solar system. Consideration is given to the principles of distance, mass and weight, and the simple dynamics of bodies. The earth is studied from the viewpoint of its geological, meteorological, and chemical aspects, these main fields introducing a non-mathematical discussion of magnetism, heat, and electricity.

4 semester hour credits

### **P 2-A Survey of the Physical Sciences**

In this course, which continues P 1-A, the phenomena of light are taken up. Following this, consideration is given to spectroscopy and matter structure, the periodic table, acids, bases, salts, and organic compounds. The course concludes with a discussion of certain aspects of physics which are of practical importance in the household, such as heating, lighting, refrigeration, and electrical appliances.

4 semester hour credits

### **P 1 Physics I**

A course in the study of the fundamental principles of the mechanics of physics. Some of the topics covered are simple harmonic motion, uniformly accelerated motion, friction, work, energy, power, fluid pressure, angular velocity, centripetal force, equilibrium under the action of a series of parallel forces, and equilibrium under the action of concurrent forces.

3 semester hour credits

### **P 2 Physics I\***

This is a thorough course in magnetism and electricity, covering all the details within the scope of standard college texts on these subjects. All lectures are illustrated by means of lantern slides, motion pictures, and special apparatus.

3 semester hour credits

### **P 3 Physics II\***

A course in the study of wave motion, sound, and light. Molecular mechanics and other fundamental principles of physics are stressed at the beginning.

Preparation: P1, P2

2 semester hour credits

## **PSYCHOLOGY**

### **Ps 1 Introduction to Differential Psychology**

An elementary survey of the psychology of individual differences including personality differences, together with a presentation of some of the practical applications of the findings of differential psychology.

2 semester hour credits

**Ps 2 General Psychology**

An introduction to general experimental psychology. The topics considered include learning, memory, thought, imagination, motivation, emotion, sensation, and perception.

Preparation: Ps 1

2 semester hour credits

**Ps 9 Psychology of Personality**

Presents a survey of historical and contemporary theories of the nature of personality. The problems of the generality of traits, the consistency of expression, and the relation of cultural factors to personality, growth, and integration will be discussed.

Preparation: Ps 2

2 semester hour credits

**Ps 10 Abnormal Psychology\***

An introduction to the field of psychopathology. The psychology of the neuroses and the minor disturbances of everyday life are emphasized. Interpretation of clinical findings in the light of some contemporary schools of psychology is included.

Preparation: Ps 9

2 semester hour credits

**Ps 11 Applied Psychology**

Methods of personality study: a survey and evaluation of procedures used in the study of personality in schools, clinics and business and industrial personnel departments.

Preparation: Ps 9

2 semester hour credits

**SOCIOLOGY****S 1 Introduction to Sociology**

In presenting a survey of the origins and sources of human society, this study provides orientation for the courses in principles and problems which follow. The several theories of organic evolution are discussed. The antiquity of man and basic anthropological data are considered. The racial and ethnic groupings of man are then studied in the light of biological, geographical, and cultural factors.

2 semester hour credits

**S 2 Principles of Sociology**

Facts and principles basic to a general knowledge of the field of sociology are presented. The origins, forms, and forces of human associations are discussed. Consideration is given the several leading schools of sociological thought. The course is designed to meet the needs of the student who desires only an elementary survey of the subject, as well as the student who plans to take advanced courses in social science.

2 semester hour credits

**S 3 Social Problems\***

Attention is given the nature, complex causation, and interrelatedness of social problems in general. Cultural change with its attendant lags, as well as other social forces and conflicts, are studied. While sociological theory is occasionally introduced to clarify the problem at hand, the course is essentially practical in character. Such problems as poverty and unemployment, race antagonisms, population pressures, and the broken home are considered. Optional field trips to various institutions give concreteness to the problems studied.

Preparation: S 1, S 2

2 semester hour credits

**S 4 Social Pathology\***

Similar to the course in Social Problems in background and approach, this study deals with the maladjustments and ills of human society. Emphasis is given those pathological conditions which exist in relations between the individual and the group. Typical subjects presented include mental defectiveness and disease, alcoholism and drug addiction, suicide, delinquency and crime, and pathologies of domestic relations. The field trips arranged for this course add to the practical knowledge of the social ills which are studied.

Preparation: S 1, S 2

2 semester hour credits



S 7 Principles of Social Ethics

To clarify the meaning of morality in social relations is the aim of this study. Right and wrong conduct is analyzed in the light of the highest values for human society. Moral laws are discussed, and the various systems of ethics are evaluated. Scientific attitudes are encouraged in order that one's moral judgments may be compatible with one's best reflective thought.

Preparation: S 1, S 2 2 semester hour credits

S 14 Urban Sociology

After studying the complex human society found in the various cities of the world, this course then turns to an analysis of the modern American city. Its types, social values, and pathological elements are discussed. Methods of city planning are considered. The belief on the part of some sociologists that democracy is doomed by its cities is examined in the light of typical problems of urban society.

2 semester hour credits

\* Starred courses are not regularly offered every year. They will be offered when elected by a minimum of ten students.

Student List

ABBOTT, WARREN G.	Arlington	DUFFY, GEORGE S.	Arlington
ACKERMAN, ROBERT A.	Medford	DUGGAN, WILLIAM T.	Lowell
ADAMI, RICHARD W.	Roslindale	DURHAM, EUGENE L.	Roslindale
ADAMS, PERCIVAL A.	Boston	EGAN, WALTER B.	South Boston
ARENA, ORAZZIO J.	Waltham	ELGEE, HARRY N.	Arlington
AVAKIAN, ONNIG	Boston	ERBAN, FRANK A.	Lawrence
BARRY, GEORGE E., JR.	Weymouth	FABIANO, SALVATORE A.	Boston
BELMONT, MARIE A.	Revere	FLAHERTY, RICHARD W.	Dorchester
BERKOWITZ, HYMAN S.	Boston	FOGARTY, BETTY L.	Brookline
BICKELMAN, MAX H.	Mattapan	FOGARTY, WARREN A.	Brookline
BLAYER, BENJAMIN	Roxbury	FORNAL, JOHN S.	Fast Taunton
BLOCK, LESLIE L.	Cambridge	FRAUMENI, FRANCIS J.	North Quincy
BOYD, ROBERT B.	Dorchester	GAGNON, PATRICIA N.	Billerica
BRODSKY, CARROLL M.	Roxbury	GEORGE, GEORGE P.	Allston
BRUZZO, HELEN	Boston	GIFFORD, ARNOLD B.	Cambridge
BUCCINI, ROMEO	Boston	GILLIS, ALFRED J.	Dorchester
BUCKLEY, JOHN F.	Charlestown	GOLDMAN, ALBERT A.	Dorchester
CALLAHAN, FRANCIS G.	Dorchester	GOODE, JOHN G.	Roslindale
CALLENDER, JOSEPH H.	Boston	GOODNOH, RUTH M.	Allston
CANNEY, JOHN P.	Dorchester	GORDON, DONALD R.	Somerville
CARROLL, JAMES M.	Lynn	GORFINKLE, SIDNEY	Dorchester
CASSIDY, MARY B.	Worcester	GOULDSBROUGH, HILDA	Methuen
CECCARELLI, RENATO	Center Rutland, Vt.	GRAY, SAMUEL L.	Roxbury
CHEEVER, JOHN A.	Boston	HAHN, ROBERT	West Roxbury
CLIFFORD, JOHN J.	Watertown	HARRINGTON, FRED. J.	Melrose
COHEN, SAMUEL S.	Revere	HARTNETT, NORMAN B.	Framingham
COLLAZZO, CHARLES J.	Woburn	HATTON, JAMES A.	Dorchester
COLOTTI, CARMINE J.	East Boston	HAYES, LEON M.	Somerville
CONDAKES, GEORGE P.	East Boston	HAYNES, DOUGLAS	Lowell
COOPERMAN, IRVING	Everett	HEFFRON, EDWARD D.	Charlestown
COYLE, RICHARD E.	Boston	HILLYARD, FRED. C.	Arlington
CUCINOTTA, JOHN V.	Belmont	HURLEY, EUGENE J.	Revere
DARLING, MAYO, JR.	Waltham	HYDE, HAROLD G.	Methuen
D'ELIA, ANNA M.	Medford	IPPOLITO, VINCENT O.	Medford
DILORETO, EMIDIO	Milford	KILDUFF, VINCENT J.	Roxbury
DOCKHAM, JOHN E.	Arlington	KINAS, ARTHUR	Brighton
DOHERTY, EDWARD W.	Dorchester	KINGSTON, JOSEPH R.	Allston

KRAFT, SUMNER	Roxbury	PROCACCINI, RAYMOND	Walpole
LAQUIDARA, DOMINIC C.	Roslindale	QUILL, TIMOTHY B.	Brockton
LAQUIDARA, FRANK A.	Roslindale	RICHARDSON, DOROTHY	Dedham
LATHURAS, KIMON J.	Roxbury	RILEY, PATTERSON A.	Boston
LEFAVOUR, GORDON W.	Beverly	RIVERS, CHARLES A.	Somerville
LESSA, CHARLES R.	East Boston	ROME, LYFORD	Dobbs Ferry, N. Y.
LEVITT, SIGFRIED	Mattapan	ROTHROCK, CECIL T.	Waltham
LISI, ROSE	Boston	RUANE, JOHN T.	Clinton
LOGOFET, ANNE A.	Boston	RYAN, JOHN J.	Woburn
LOMBARDI, DENO J.	Cambridge	SARNELL, RICHARD D.	East Braintree
LOVE, JAMES M.	Everett	SAWABINI, CHARLES E.	Brookline
LOVETT, ROBERT F.	Newton	SCHEIN, DONALD E.	Brookline
MAGUIRE, JOHN F.	Arlington	SCHWARTZ, MAURICE	Lawrence
MALATSKY, SIDNEY J.	Chelsea	SHAFFER, MARTIN	Everett
MALTON, WILLIAM C.	Dorchester	SIANO, PRUDENCE G.	Peabody
MARTINO, FELIX P.	Framingham	SILVERMAN, DAVID S.	Dorchester
MCDONALD, JOHN F.	Charlestown	SILVERMAN, SHELDON	Dorchester
McELROY, DAVID L.	Brookline	SIMMERS, RICHARD C.	Andover
McGEE, ROBERT M.	Rutland, Vt.	SMITH, HOLLIS A.	East Milton
McKEIL, JOHN T.	Dorchester	SMITH, THOMAS E.	Natick
McKENNA, JOHN J.	Danvers	STEINKRAUSS, LAWRENCE	Arlington
MEDEIROS, EDMUND T.	Somerville	STILES, ROBERT	Roslindale
MEEHAN, THOMAS M.	Brookline	SULLIVAN, ARTHUR E.	Salem
MILLEN, SYDNEY G.	Boston	SUSHMAN, DAVID	Roxbury
MOAN, EDWARD J.	Auburndale	SWEENEY, JOHN F.	Dorchester
MONIS, SYLVIA	Dorchester	TABACHNICK, MORRIS	Chelsea
MOROCHNICK, EDWARD N.	Boston	TEIXEIRA, JOSEPH R.	Dorchester
MUNSON, ROBERT E., JR.	Melrose	THOMPSON, PHYLLIS E.	Medford
MURPHY, MATTHEW L.	Roxbury	THOMPSON, WILLIAM E.	Boston
MURRAY, EDWARD F.	Malden	VANCE, ROBERT A.	West Roxbury
MURRAY, WILLIAM F.	Cambridge	VETRANO, JOSEPH F.	Everett
O'BRIEN, EDWARD F.	Dorchester	VIAL, JOHN S.	Natick
ORLICK, PHOEBE E.	Brookline	WADLEIGH, BEATRICE B.	Swampscott
ORPIN, JOHN J.	Allston	WEIR, WALTER D.	Westwood
O'SULLIVAN, LAURENCE	Dorchester	WELCH, PAUL R.	Bangor, Maine
PATCH, WILLIAM H.	Melrose	WILFAND, HAROLD A.	Dorchester
PATRIQUIN, PRISCILLA	Arlington	WILLIAMS, MARGARET M.	Dorchester
PEIRCE, ROBERT W.	Arlington	ZARTHAR, FRANCIS S.	Boston
PINO, JOHN A.	Jamaica Plain	ZONDERMAN, LOUIS A.	Boston

# NORTHEASTERN UNIVERSITY

## College of Liberal Arts

Offers a broad program of college subjects serving as a foundation for the understanding of modern culture, social relations, and technical achievement. Varied opportunities available for vocational specialization. Degree: Bachelor of Science or Bachelor of Arts.

## College of Engineering

Offers curricula in Civil, Mechanical (with Aeronautical option), Electrical, Chemical, and Industrial Engineering. Classroom study is supplemented by experiment and research in well-equipped laboratories. Degree: Bachelor of Science in the professional field of specialization.

## College of Business Administration

Offers three curricula: Accounting, Marketing and Advertising and Industrial Administration. Each curriculum represents in itself a broad survey of business technique, differing from the others chiefly in emphasis. Degree: Bachelor of Science in Business Administration.

## School of Law

Offers day and evening undergraduate programs admitting those who present a minimum of one-half of the work accepted for a bachelor's degree in an approved college or its full equivalent, each program leading to the degree of Bachelor of Laws. Coeducational.

## School of Business

Offers curricula through evening classes leading to the degree of Bachelor of Business Administration with appropriate specification in Accounting, Management (with Industrial and Merchandising options), and Engineering and Business or the degree of Bachelor of Commercial Science in Law and Business Management. Preparation for C.P.A. examinations. Shorter programs arranged to meet special needs. Coeducational.

## Evening Courses of the College of Liberal Arts

Certain courses of the College of Liberal Arts are offered during evening hours, affording concentration in English, History and Government, or Social Science. A special program preparing for admission to the School of Law is also available. The program is equivalent in hours to one-half the requirement for the A.B. or S.B. degree. Associate in Arts title conferred. Coeducational.

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The Colleges of Liberal Arts, Engineering, and Business Administration offer day programs for men only and are conducted on the co-operative plan. After the freshman year students may alternate their periods of study with periods of work in the employ of business or industrial concerns at ten-week intervals. Under this plan they gain valuable experience and earn a large part of their college expenses.

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In addition to the above schools the University has affiliated with it and conducts: the Lincoln Technical Institute offering, through evening classes, courses of college grade in various fields of engineering leading to the title of Associate in Engineering; and the Lincoln Preparatory School, an accredited evening school preparing for college entrance and offering other standard high school programs.

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For further information regarding any of the above schools, address

## NORTHEASTERN UNIVERSITY

Law School  
47 Mt. Vernon Street

Other Schools  
360 Huntington Avenue

Boston, Massachusetts  
Telephone: KENmore 5800













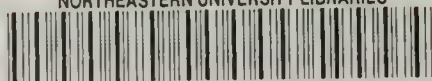


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